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GATES COUNTY LAND USE PLAN

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N.C. COASTAL RESOURCES COMMISSION

INTRODUCTION

The coastal area of North Carolina is one of the most important regions in the United States for food production, future expansion of commerce, industry and recreation. To enable orderly growth and protection of important natural resources of that area, the 1974 General Assembly passed the Coastal Area Management Act.

The Coastal Area Management Act is a state law that asks local government in 20 counties in Coastal North Carolina to prepare a blueprint for their future growth and development. The county officials are asked to work closely with local citizens in deciding what their goals are, in planning for their best use. This Land Use Plan will serve as that blueprint.

The purpose of the Land Use Plan is to determine the most appropriate future use of land in Gates County. This plan was undertaken by the county citizens, elected officials, and staff in an effort to fulfill the requirements of the Coastal Area Management Act and provide an opportunity to all citizens in the county to participate in the planning process.

In recent years it has been recognized that rigorous demands are being made upon the land and natural resources that were not evident a short time ago. This can be attributed in great part to rapidly advancing technology and population migration. We have moved into an era where various use of the land in one area may adversely affect the property values and use of land miles away.

In order to preserve and protect natural resources and property values, it is necessary to plan for future development to occur where the land and natural resources can withstand development.

On the State level, administration and coordination of the Coastal Area Management Act will be handled by the Department of Administration and Department of Natural and Economic Resources. The Act creates two citizen agencies:

Coastal Resources Commission - The commission is a 15-member body appointed by the Governor. All members are residents of the coast. Twelve were chosen from among nominees made by counties and towns in the coastal area. Three are appointed at the discretion of the Governor. The Commission is responsible for establishing planning guidelines, approving land use plans and issuing permits for construction when required.

Coastal Resources Advisory Council - The Council is a 47-member body made up of locally appointed representatives from each coastal county, plus representatives from six state government departments. It includes a broad cross section of coastal interests. The Council advises the Commission on those matters before the Commission, and assists local governments.

There are three major land use management tools created by the Bill: Land use plans, areas of environmental concern and a permit system.

Land Use Plans - Each county has prepared a land use plan. The plans are based on the goals of the people in the county, the resources available in the county, and the most reasonable path for reaching toward those goals with the resources available. After the plans are adopted, use of the land must agree with the plans.

Areas of Environmental Concern - These areas and their boundaries will be designated by the Coastal Resources Commission. We know from experience to be cautious when using these areas. They include marshlands, beaches, sand dunes, navigable waters, national and state parks and areas of historical importance. Designation of an area as one of environmental

concern does not prohibit use of that area. It is a warning sign to be careful.

Permit System - Any development within an area of environmental concern must have a permit. The Act does not require a permit for development outside areas of environmental concern. The Act requires the following projects in areas of environmental concern to obtain a permit from the Coastal Resources Commission: those projects currently needing state permits; those of greater than 20 acres in size; those that involve drilling or excavating natural resources on land or under water; those which involve construction of one or more structures having an area in excess of 60,000 square feet.

PRESENT CONDITIONS

Regional Location

Gates County is located in northeastern North Carolina. It is bounded on the east by Camden and Pasquotank Counties, on the south by Perquimans and Chowan Counties, on the west by Hertford County (along the Chowan River), and on the north by the State of Virginia. The county has a total area of 343 square miles.

Gates is one of the few counties covered by the Coastal Area Management Act which is not contiguous to either the Atlantic Ocean or to one of North Carolina's major sounds (Albemarle, Currituck, and Pamlico). The county's southernmost point lies approximately thirty miles north of the western end of the Albemarle Sound on the east bank of the Chowan River. Gates's inclusion among the counties covered by the Act is due to the fact that the Chowan River is classified by state law as "estuarine water."

EXISTING POPULATION

Township Population Trends

Gates County's population has been declining slowly but steadily for the past thirty years. In 1970, the county's total population was 8,524. This represented a decrease of 1,536 people since 1940 when the population was over 10,000.

Long-term population losses have occurred in six of the county's seven townships. Only Gatesville and Reynoldson Townships have experienced growth during this period.

The county lost seven percent of its population between 1960-1970, the sharpest ten-year decline since 1940. During that same decade the population of Reynoldson and Hall Townships increased significantly but not enough to regain their 1940 levels. This trend is expected to continue during the planning period. These data are shown in the following table.

TABLE I
POPULATION
1940 - 1970
BY TOWNSHIP

Township	1940	1950	1960	1970
Gatesville	1,563	1,571	1,658	1,598
Hall	950	944	847	949
Haslett	1,053	929	904	767
Holly Grove	1,646	1,751	1,599	1,367
Hunters Mill	1,812	1,539	1,568	1,339
Mintonsville	1,571	1,452	1,287	1,045
Reynoldson	1,465	1,369	1,391	1,459
COUNTY TOTAL	10,060	9,555	9,254	8,524

Seasonal Population Fluctuations

Unlike many other counties in the coastal plain, Gates experiences virtually no seasonal population fluctuation resulting from tourism. This is due to its position far inland from the major tourist-attracting bodies of water.

Future Population

Gates County's population has been declining for more than three decades, largely the result of out-migration. In the absence of evidence to the contrary, the only reasonable assumption about population dynamics in the near- and intermediate-term future is that the decline will continue. A review of several sets of population projections for Gates County supports this assumption. These are presented in the following table.

TABLE II
POPULATION PROJECTION
1980 - 2000

Projection Type	Year		
	1980	1990	2000
OBERS Series "C"	8500	8800	9100
OBERS Series "E"	8200	7500	7000
N. C. Department of Administration #1	7402	6310	5158
N. C. Department of Administration #2	8000	7700	7300

The wide disparity between these projections results from differing methods of projection and from differing assumptions about future birth rates, mortality rates, migration, and other factors. Nevertheless, it is disappointing to find that demographers are so divided in their prognoses for communities of decreasing population.

The significant feature of the four preceeding projections is that three of them exhibit the general decline anticipated solely on the basis of the county's past performance. It would seem then that a simple average of the four projected population levels is as sound as any one of them individually. On the basis of this, the following estimates of population were adopted by the Gates County citizens to be used throughout the remainder of this report:

Year	Estimated Population
1980	8,025
1990	7,577
2000	7,139
2025	6,929

Age Distribution

The outstanding components of the 1960-1970 population change were the decrease in the number of persons aged 0-34 and the increase of persons aged 55 and over. The younger groups constitute a smaller percentage of total county population in 1970 than in 1960 while the elderly group increased as a percentage of the total. Age group distributions for 1960 and 1970 are shown in Table III.

The population decline shown in Table III is underscored by the declining number of births in the county. Between 1960 and 1970 the number of live births declined from 225 to 127. The decline in live births can be attributed to a number of factors including improved birth control methods and the outmigration of women in the childbearing age group of 15-49 years.

TABLE III
AGE DISTRIBUTION
1960 - 1970

Age Group	1960		1970	
	Male	Female	Male	Female
0-4	555	526	367	313
5-14	1091	1052	978	891
15-24	716	631	697	686
25-34	470	536	437	393
35-44	540	471	442	482
45-54	479	457	513	509
55-64	349	392	425	423
65 & Over	411	478	401	568
TOTAL	4611	4543	4260	4264

Racial Composition

In 1960, 54% of the County's population was Negro and 46% was Caucasian. Although there was a decline in both Negro and Caucasian population of the County between 1960 and 1970, greater loss was in the Negro segment (10% Negro vs 6% Caucasian). Census data for 1970 indicate that 53% of the County's population was Negro and 47% was Caucasian.

Age-Sex profiles for 1960 and 1970 indicate that loss of Negro population occurred primarily in the 0 to 14 age group and the second largest loss was between 15 and 44. This was also true of the Caucasian population but in lesser numbers.

This further points out the trend towards out-migration of the child-bearing productive age group in both races. Out-migration, coupled with the decrease in birth rate, has contributed to the large decrease in the 0 to 14 age group.

EXISTING ECONOMY

Family Income

The median family income in Gates County in 1970 was \$5,879. Even after converting this to constant (1960) dollars, a great improvement in family income is seen to have occurred during the 1960-1970 decade (see Table IV). Gates County, in fact, outstripped both the State and Region R in family income improvement (though not in absolute dollar level) during that period.

TABLE IV
MEDIAN FAMILY INCOME
1960 - 1970

Area	1970 Median Family Income (Constant 1960 Dollars)	Percentage chg. 1960-70
Gates County	\$4,585	+ 102.8
Region R	\$6,311	+ 64.6
STATE OF N. C.	\$6,064	+ 53.2

The County's median family income for 1970 is still far below that of Region R and the State. The per capita income is drastically low when compared to the remainder of the State (99th out of 100 counties).

The increase in median family income, however, is encouraging. It may be noted at this point that the percent of families in Gates County considered below the poverty threshold has decreased between 1960 (57.39%) and 1970 (25.53%) by 56.02%.

Retail Sales

Gross retail sales in the County have increased from \$3,452,170 in 1960-61 to \$10,018,556 in 1971-72. This represents an approximate 200 percent increase for the 11 year period. All retail sales groups realized an increase in total retail sales between 1964-65 and 1971-72. The largest increases occurred in building materials, general merchandise, and food. This trend is interesting considering the close proximity of the sophisticated retail centers of the Virginia Metropolitan Area, Elizabeth City, Edenton and the fact that so many of the County's employed commute to these areas for work.

Educational Attainment

Educational achievement of the County's population was below that of the State and Region R as a whole, both in 1960 and 1970. In 1960, the *median number of school years completed for persons 25 years of age and older was 8.9 for the State, 8.1 years for Region R, and 7.8 years for Gates County. In 1970, the State, County, and Region R's educational attainment increased by over a full school year with the median number of school years completed of 10.6, 9.1, and 9.5 respectively. Also seen in Table V is the percent of the 25 years+ population that is high school graduates. Gates County, in both areas, trails the State and Region despite a large increase over 1960.

*Median school years completed is that year which divides the total school years into two equal parts, one-half being more than the median year and one-half being less.

TABLE V

Place	Median Number of School Years Completed for 25 & Older		Percent County Population With High School Diplomas
	1960	1970	1970
Gates County	7.8	9.1	23.2
Region R	8.1	9.5	28.5
State (N.C.)	8.9	10.6	38.4

Gates County has attained a pupil/teacher ratio comparable to that of the State and Region R in the secondary schools; however, it appears that more effort should be concentrated within the elementary schools which depicts a greater number of pupils per teacher than the elementary schools of the State and Region R.

Gates County is presently allocating more money per pupil than either Region R or the State. (see Table VI).

TABLE VI

	1970 Pupil-Teacher Ratio		Expenditure Per Pupil
	Elem.	Sec.	
Region "R"	25	19	\$586.00
State of N. C.	26	21	\$463.00
Gates County	30	23	\$632.00

Employment

The number of employed persons residing in Gates County has increased between 1960 and 1970. The total employed residents in 1960 was 2,666 as compared to 2,777 in 1970 representing a 4% increase. The number of persons

employed in 1960 represented 29% of the total county population. This number increased to 33% of the total county population in 1970.

Even though the number of employed persons and the percent of the County's total residing population employed increased during the 10 year period between 1960 and 1970, the number of jobs in Gates County decreased by 318 or 15%. This may be attributed largely to a decline in agricultural employment.

Commuting patterns for Gates County point to the same trend. In 1960 there was a *net commuting loss of 569 persons and a net commuting loss in 1970 of 998. This represents a 75% increase in the out-commuting trend.

Many factors may contribute to this trend. The gradual disappearance of small farms due to large farm competition and mechanization has forced a flight to the city and towns for jobs by rural residents. There is little indication that the small farm will again flourish--therefore, continued commuting to the city and suburbs for employment. The major metropolitan areas have continued to draw workers by offering higher salaries and continually improving highways which make commuting more feasible in spite of rising fuel costs. The loss of workers to Virginia is likely to continue unless there are some developments in the northeastern counties which create more jobs for residents.

In Gates County 23% of the employed are white collar workers and 77% are blue collar workers (as defined by the N. C. Department of Public Instruction).

*Net Commuting Loss - The number of persons commuting to Gates County for employment subtracted from the number commuting from Gates County for employment.

Agricultural Characteristics

Between 1960 and 1970, the acres of harvested and idle cropland has remained approximately the same. However, other changes have occurred on the agricultural scene that are noteworthy. For instance, the farm population discussed earlier has decreased between 1960-70 by 52%. At the same time, farm income rose 106%.

This may be attributed in part to larger farms employing more sophisticated labor saving machinery. As a result the demand for farm labor is not as great. This has resulted in farm labor migrating to other areas where job opportunities are greater. This situation has led to a decreasing farm labor supply which is badly needed by the small farm operator who cannot afford the expensive, automated farm machinery. The small farm operator cannot provide enough work nor pay wages that would interest an adequate labor supply.

Gates County witnessed its greatest decline in the number of farms between 1954-64 (see Table VII). Within this time period, the number of farms decreased 46.8% whereas the average farm size increased 46.1%. This points to the continuing trend throughout the United States of small, less efficient farms giving way to larger, more efficient farming operations.

The trend from small to large farms has been caused principally by

1. inflation
2. farm labor shortages
3. high labor wage increases
4. high cost of sophisticated machines

These four factors stymie survival attempts by small farm operators. The small farm owner has been pressured into selling to the larger farm operations that are production oriented and can afford to purchase the high priced, sophisticated machinery. However, in Gates County, between 1964-70,

both trends have practically ceased, suggesting that the farm operations, as they now exist, are returning adequate income for the operator's subsistence. This trend is depicted in Table VII.

TABLE VII
FARM NUMBER AND SIZE

NUMBER OF FARMS					AVERAGE SIZE OF FARMS				
1954	1964	% Change 1954-64	1970	% Change 1964-70	1954	1964	% Change 1954-64	1970	% Change 1964-70
1165	620	-46.8	614	-1.0	99.3	145.1	46.1	140.5	-3.1

Further investigation illustrates the desire of the Gates County small farm operator to continue his farming business. Table VIII portrays the increasing change between 1960-70 of the number of farm operators working 100 or more days off the farm. In Gates County, during the ten year period, there was an increase in this number from 20.6% in 1960 to 38.3% in 1970. This trend appears more evident in Gates County than in Region R and the State. This fact may be attributed to the fact that more Gates farmers are trying to hold on to their small farms by supplementing their income with second jobs.

TABLE VIII
FARM OPERATORS WORKING 100 OR MORE DAYS OFF THE FARM

	1954	1960	1970
	Percent of Total Operators	Percent of Total Operators	Percent of Total Operators
Gates Co.	19.8	20.6	38.3

Tenure of farm operators also illustrates the point that the smaller farm

is succumbing to larger farm operations. Between 1964 and 1970 there was an increase in full owners from 48 to 59, a decrease in part owners from 34 to 25 and a decrease in tenants from 18 to 16.

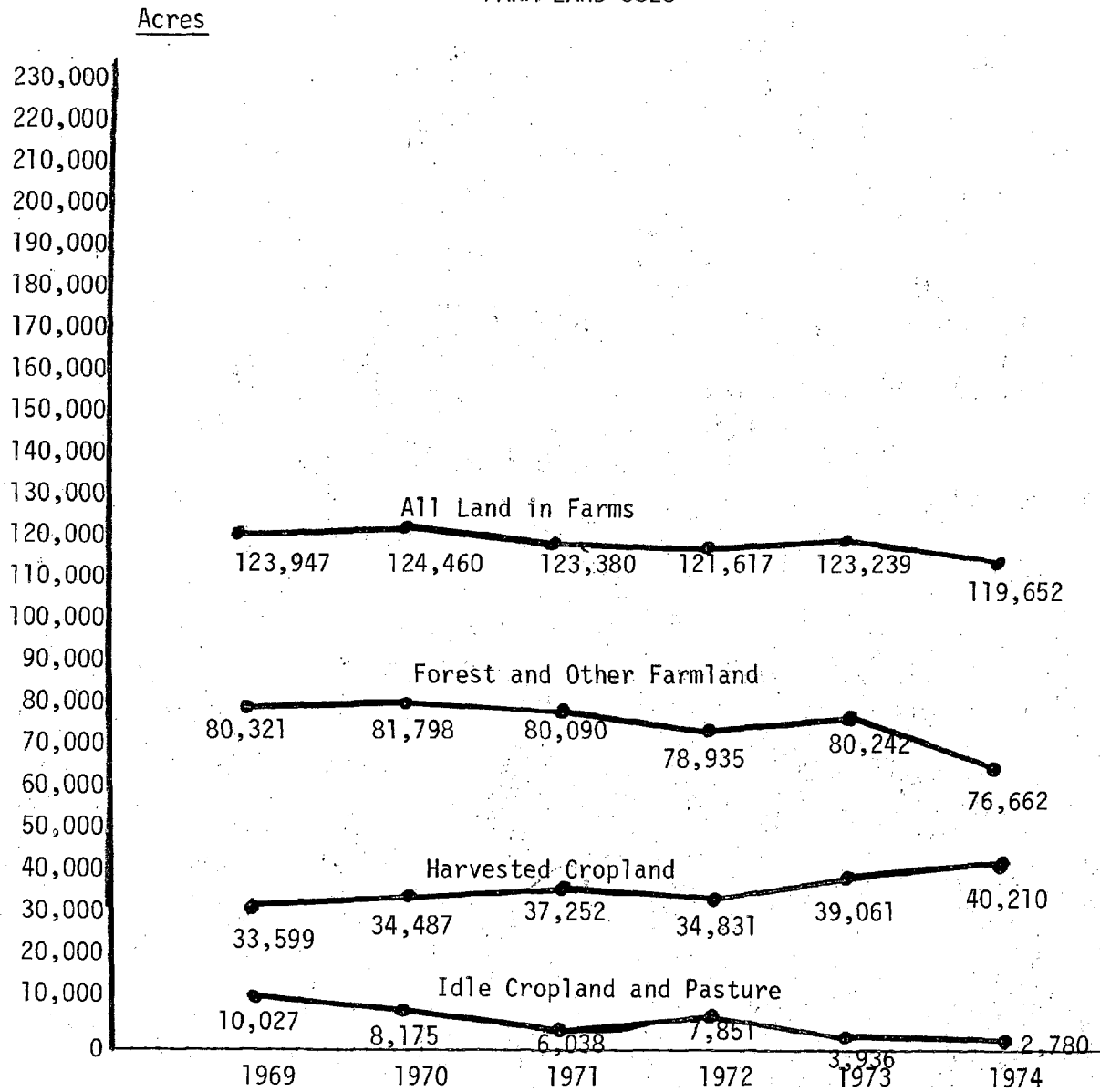
Gates County's farm population declined (52.2% decrease) in the past ten years (Table IX). At the same time, those persons seeking a rural setting for living conditions while maintaining non-farm occupations increased by 19.8%. Both trends are evident in the nation and in Region R and the State. This trend is expected to continue as people move from the large city in search of aesthetically pleasing open space.

TABLE IX
RURAL CHANGE

	Urban Percent Change 1960-70	Rural Farm Percent Change 1960-70	Rural Nonfarm Percent Change 1960-70
Gates County	---	-52.2	+19.8
Region R	+1.1	-54.0	+19.3
State of N. C.	+26.9	-53.6	+24.5

In the following diagram of Gates County's farm land use, the amount of land in farms has fluctuated between 1969 and 1974. The 1974 acreage was approximately 4,000 acres less than 1969. Forest and other farmland witnessed an overall decrease between 1969 and 1970. The amount of harvested cropland increased every year except 1972. Idle cropland and pasture has continually declined from 10,027 acres in 1969 to 2,780 in 1974.

GATES COUNTY FARM LAND USES



In the next diagram, on page 17, the amount of Gates County's major crops harvested is given for the 1969-1974 time period.

The amount of acres harvested for corn increased each year until 1972. Between 1972 and 1974, increases were once again noted.

Soybeans followed the same pattern as corn. Overall increases in acreage was greater, increasing from 8,631 in 1969 to 13,168 in 1974.

Peanut acreage harvested decreased steadily each year except 1973.

Cotton and tobacco acreage has decreased each year since 1969.

Gates County, between 1960-1970, witnessed an increase in receipts for crops and livestock/poultry. In Table X, there was a substantial increase margin in receipts for livestock/poultry over crops. This trend is expected to continue and accelerate for poultry due to the recent efforts of Perdue Farms, Inc. to expand their broiler industry into Northeastern North Carolina.

TABLE X
PERCENT CHANGE IN RECEIPTS 1960-1970

	Crops	Livestock & Poultry
Gates	56.3	180.1

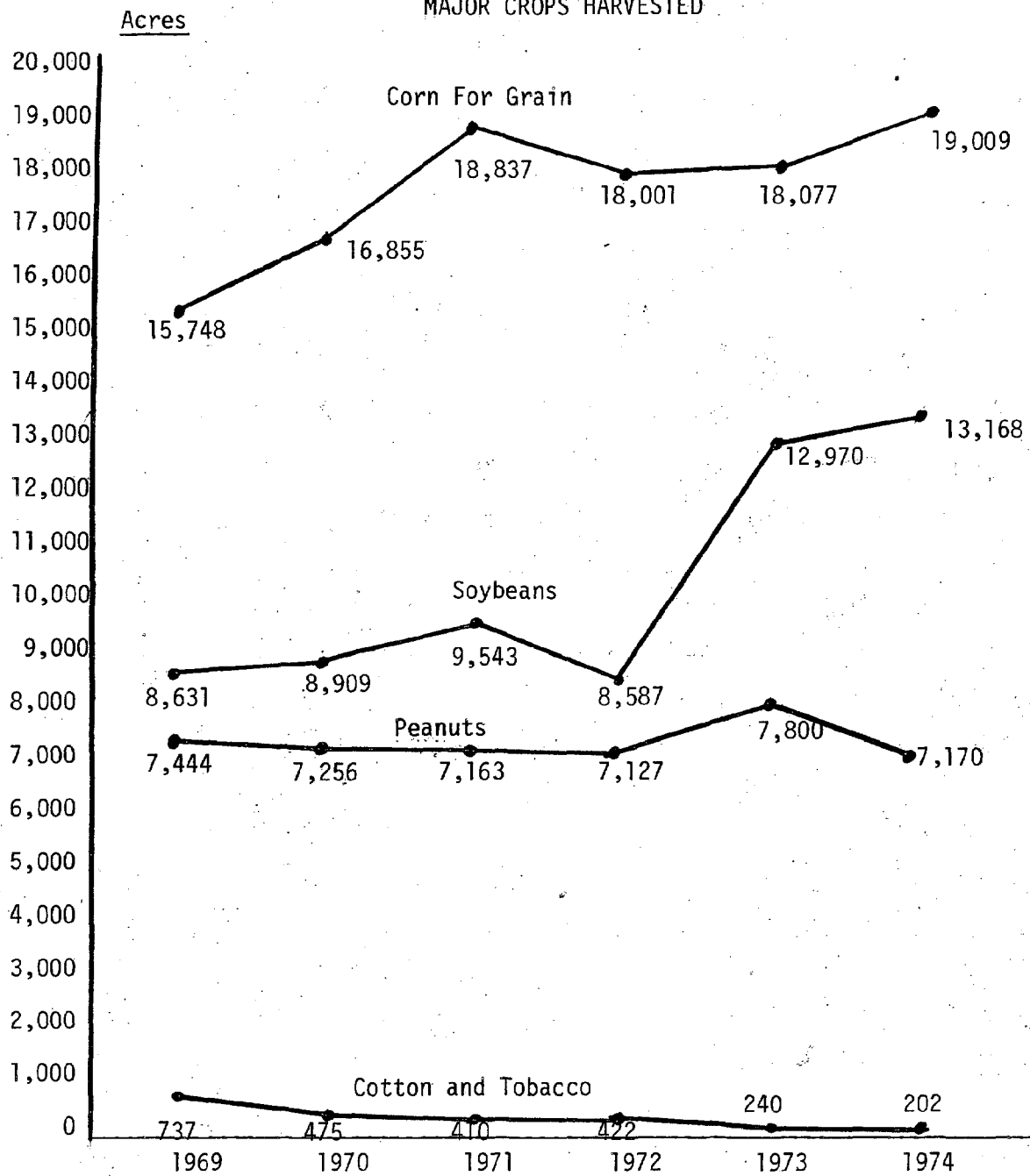
Forestry

In 1974, all forest ownership was comprised of 156,206 acres. 63,742 was under the ownership of the forest industry, 62,546 was farmer owned and 29,918 was owned by private individuals.

The amount of forest ownership has decreased since 1964 by 6,594 acres.

Woodland owners have failed to realize the value of good forestry management. Emphasis should be on reforestation and putting their timber back into a productive condition.

GATES COUNTY
MAJOR CROPS HARVESTED



Farmers need to change their attitude about reforestation and be willing to return a portion of profits to aid in reforestation. A forestry program should be set up on each farm to show the economic value of using good forestry management practices. Farmers need to be informed of the latest production techniques.

According to the publication IMPACT '76, Gates County, N. C., farmers within the county are not attaining their full production capabilities. Regarding the three major crops, the following problems and suggestions have been determined by the Agriculture Extension Service:

MAJOR CROPS: PROBLEMS AND SOLUTIONS

TYPE OF CROP	PROBLEMS	PROPOSED SOLUTIONS
CORN PRODUCTION	<ul style="list-style-type: none"> --- Yields are far below the potential of most soils in the country. --- Farmers are not using adequate management techniques. 	<ul style="list-style-type: none"> --- Educate the farmers on management and production techniques.
SOYBEAN PRODUCTION	<ul style="list-style-type: none"> --- Producers are not using recommended production practices such as proper rotation, fertilization, insect and weed control, etc. 	<ul style="list-style-type: none"> --- Educate farmers on production and management techniques.
PEANUT PRODUCTION	<ul style="list-style-type: none"> --- Farmers have not reached full potential production for the land due to improper use of chemicals, pod rot, and inadequate farm management techniques. 	<ul style="list-style-type: none"> --- Farmers must begin practicing recommended production practices, familiarize themselves with latest pesticide information, and practice better management techniques.

There are other farm operations conducted within the county that have been analyzed. Some of these and their problems/solutions are:

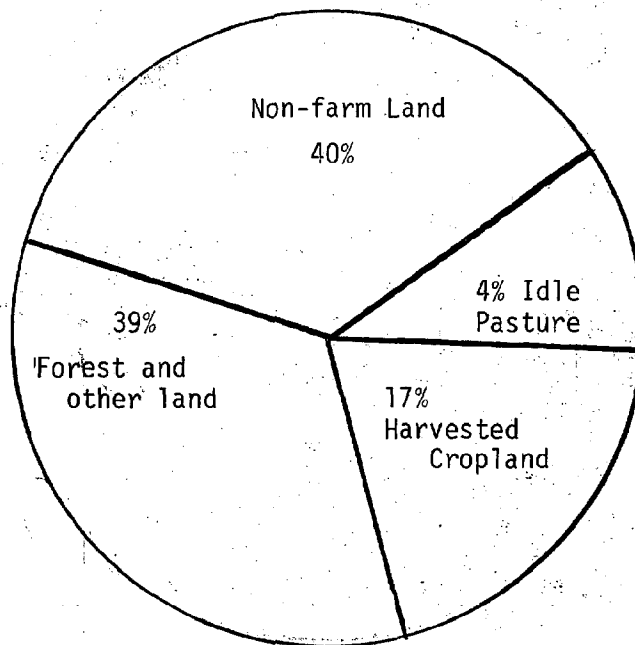
- a) Swine production - Producers have failed to use proper management to maximize their income from their swine operations.
- b) Beef cattle production - Farmers have failed to recognize the opportunity to increase income from cow-calf herds and feeding beef cattle. Better record keeping on the production of land involved in cattle production will help in making the decision on whether to decrease cattle production and increase pasture on marginal land.
- c) Tobacco production - The major problem in tobacco production is emphasis on economical harvesting aids and equipment. Labor is in short supply and the cost of labor is so high that production without mechanization will eventually make it unprofitable to produce tobacco. Another problem is the failure of farmers to realize the economic value of following the all-practice production outline to increase net income.
- d) Horticultural production - Many farmers of low-income families do not realize what the addition of alternative enterprises such as grapes or even a family garden could mean in increasing their incomes. An all out effort is being made through the Gates County Extension Service to encourage 42 families to participate in a County Garden Program and 12 low income farmers add one (1) acre of grapes to their operation to increase their income.
- e) Forestry production - Woodland owners have failed to realize the value of good forestry management. Emphasis should be on reforestation and putting their timber land back into a productive condition.

The Gates County farmer has not been using his land to its greatest capacity. Due to the present trend of high yield production and mechanization, he must become educated to and practice modern management and production techniques in order to survive.

EXISTING LAND USE

Land utilization in Gates County may be divided into four large groups. They are: *non-farm land, forest and other land, harvested cropland, idle and pasture. The percentage of each is shown in the following diagram:

UTILIZATION OF ALL LAND



*Crops with no significant agricultural production.

Residential Use

Residential development in the County consists primarily of single-family rural units. The distribution of housing units is wide-spread throughout the County as depicted on the existing land use map.

Mobile homes have recently become an increasing source of housing supply. This trend is reflected across the nation, and Gates County is no exception. (see Table XI).

The number of mobile homes increased by 169% between 1970 and 1974. Mobile homes now make up 11% of the housing stock in Gates County as compared to 4% in 1970. The largest percentage increases occurred in Holly Grove, Hunter's Mill, and Mintonville Townships. These townships also witnessed a greater increase in conventional housing supply during the same period. This may be attributed to the close proximity of these townships to the major employing areas of Virginia, Elizabeth City, and Edenton.

TABLE XI
MOBILE HOMES (1970-1974)

TOWNSHIP	Census 1970	Visual Survey 1974	# Change	% Change
Reynoldson	22	55	+33	150.0
Hall	29	67	+38	131.0
Haslett	14	22	+ 8	175.0
Gatesville	24	50	+26	108.3
Holly Grove	6	52	+46	766.6
Hunters Mill	4	18	+14	350.0
Mintonville	5	16	+11	220.0
TOTALS	104	280	+176	169.2

In January of 1974 the Division of Community Assistance conducted a visual survey of the exterior condition of housing within the county. Housing structures were graded and classified into three general categories as follows:

Standard: Structures which have no defects or only slight defects which are correctable during regular maintenance.

Deteriorated: Structures having defects which require major repair to prevent further deterioration.

Dilapidated: Structures which are unfit and unsafe for human occupancy. Such housing has one or more critical defects which are beyond economical repair.

In addition, residential structures were classified as to whether they were mobile home units or of conventional construction.

The survey indicated a total of 2,586 rural dwellings in Gates County. Of this amount, 67.6% of the housing was classified as standard, 12.9% deteriorated, 8.5% dilapidated, and 10.8% were mobile homes. Table XII indicates the total number and percentage distribution by condition of residential structures in each of the seven townships in Gates County. There are no large concentrations of *substandard units in any one particular area of the County outside the Town of Gatesville. They are distributed rather evenly throughout the County.

21.4% of the housing was judged to be substandard. Housing becomes substandard for many reasons. Poor original construction and lack of proper maintenance are two major factors. However, much more is involved than just poor construction and maintenance. Substandard dwellings are a problem in

*Substandard: As used in this study, encompasses housing of deteriorated and dilapidated condition.

and of themselves, but more than this, they are symptoms of a much broader problem. The environment in which housing is located is vital to its existence. Such factors as incompatible land use, lack of community facilities, land speculation, poor subdivision practices, and the inadequate income of families lead to deterioration.

TABLE XII
HOUSING CONDITIONS AND MOBILE HOMES
BY TOWNSHIP: 1974

Township	Standard %		Deteriorated %		Dilapidated %		Mobile Home %		Total %	
Reynoldson	245	61.0	71	17.7	30	7.4	55	13.7	401	100
Hall	243	69.0	21	5.9	21	5.9	67	19.0	352	100
Haslett	154	63.9	38	15.7	27	11.2	22	9.1	241	100
Gatesville*	237	68.2	28	8.0	32	9.2	50	14.4	347	100
Holly Grove	346	70.0	53	10.7	43	8.7	52	10.5	494	100
Hunters Mill	282	69.1	62	15.4	39	9.7	18	4.4	401	100
Mintonville	242	69.1	63	18.0	29	8.2	16	4.5	350	100
TOTALS	1749	67.6	336	12.9	221	8.5	280	10.8	2586	100

Commercial Use

Gates County's commercial land use has changed very little over the past years. Gatesville remains the major retail center with a variety of small shops. The remainder throughout the County primarily distribute food and gasoline and are strategically located along primary transportation systems and at important crossroads. It is evident that each location originated because of onetime population concentrations and/or vehicular circulation. Whether or not each adequately serves the retail needs of a particular

*This survey excludes the Town of Gatesville.

section of the County is difficult to determine. For a higher level of comparison shopping, residents must travel to larger retail trade areas in Virginia, Elizabeth City, Ahoskie, and Edenton.

It is obvious in many cases that some of these establishments create many problems which would not necessarily occur if located elsewhere or concentrated in other areas. One of the problems created is the traffic hazard associated with the crossroads commercial areas. With insufficient off-street parking, cars are often parked on or close to secondary and primary roads reducing the field of vision for oncoming cars. An additional problem caused by commercial structures in the rural areas is that they are often constructed too close to the primary roads. The Existing Land Use Map provides an adequate picture of the land being utilized for retail and wholesale establishments.

Industrial Use

According to the windshield survey taken in 1974, five industrial operations were identified. All five locations are east of Gatesville. Industrial land use is not expected to significantly alter land use patterns within the County within the ten year planning period. This may be attributed to various reasons including an inadequate availability of local community facilities, services, and skilled labor supply that are essential for industrial development.

Public and Semi-Public Use

Public and semi-public uses include schools, government offices, and recreation areas. The demand for land under this category has not been intensive in the past and is not expected to be a forceful land consuming factor during the ten year planning period.

Recreation Use

Gates County has been rated as having eleven types of outdoor recreation potential available for possible development. Each has been rated either high, medium or low development potential.

The types of recreation having potential in Gates County are summarized as follows:

1. Big game hunting areas. Hunting areas for small game have medium potential. Waterfowl has medium potential because of the abundant habitat resources.
2. Vacation cabins, cottages, and homesites have medium potential for future development.
3. Camping grounds for vacation campers have medium potential. Transient campers were judged to have medium potential.
4. Fishing waters for warm water fishing have medium potential for development.
5. Natural, scenic, and historic areas have medium potential for development. The Great Dismal Swamp is a unique natural area and was felt to have high potential.
6. Vacation farms, although yet untried in this area, were appraised as having medium potential.
7. Water sports are possibly the most popular of all outdoor activities. With adequate existing water sites, these types of sports were appraised as having medium potential.
8. Picnic and field sports areas were appraised low for game, play, target, and bicycling areas. Picnicking areas were judged to have medium potential.
9. Golf courses for standard and par-3 golfing have low potential for development as do driving ranges and miniature golf, due to limited demand for these types of activities by strictly local people.
10. Riding stables have low potential. The natural resources suitable for this activity are present in the county, however.
11. Shooting preserves rated only low potential with the demand being poor as a result of the small proportion of population in the "over age 30" professional group which supplies the bulk of clientele for this activity.

To aid in assessing recreational facilities, the Bureau of Outdoor Recreation (BOR) has established a classification system for different recreation facilities. Following is a description of each class. Each recreation facility which now exists in the county has been classified using this system.

BOR Class I: HIGH DENSITY RECREATION AREAS

Intensive development and recreation activities such as group sports. Usually within or near major urban populations.

BOR Class II: GENERAL OUTDOOR RECREATION AREAS

Generally less intensive and more remote than Class I areas. Interesting and attractive setting for activities such as camping, nature walks and outdoor sports.

BOR Class III: NATURAL ENVIRONMENT AREAS

Weekend and vacation activities depend on a natural setting such as nature study, sightseeing, hunting and fishing. Light facility development, access, trails and campsites.

BOR Class IV: OUTSTANDING (UNIQUE) NATURE AREAS

Outstanding natural features that merit special attention and preservation. Activities limited to those that preserve the setting. Minimum development outside the immediate area of the unique features.

BOR Class V: PRIMITIVE AREAS

Wild and undeveloped areas removed from the effects of civilization. Activities limited to those requiring minimum of conveniences and equipment. No development of recreational facilities except trails.

BOR Class VI: HISTORIC AND CULTURAL SITES

Sites associated with history, tradition or cultural heritage that merit preservation or restoration. Activities such as sightseeing and study of features. Development not to detract from value of site.

Of the six BOR Classifications, Gates County's 12 outdoor facilities were listed either as Class II or III.

Gates County is limited greatly in the availability of recreation programs and facilities. What does exist is limited in variety (primarily hunt clubs) and public availability (primarily for private use). Facilities for public use structured around an organized program are non-existent in Gates County.

Although potentials exist in the county for recreation (public and private), the potential cannot develop alone. The people of Gates County must have the incentive to work for recreation facilities and they must let this fact be known.

Following is a list of each facility and its appropriate BOR Class, address, and operation status.

BOR CLASS II				
NO.	NAME	LOCATION	OPERATION STATUS	ACREAGE
1.	Bennetts Creek Landing	Gatesville	Commercial	1
2.	Merchants Mill Pond	Gatesville	Public	1,001
3.	Nixons Land & Boat Club	Gatesville	Private Club	1
4.	Rays Beach Fish Club	Sunbury	Private Club	1
5.	Shoups Marina	Winton	Commercial	5
6.	Va.-Carolina Boat Club	Eure	Private Club	1
BOR CLASS III				
	NAME	LOCATION	OPERATION STATUS	ACREAGE
7.	Gates Community Hunt Club	Eure	Private Club	7,000
8.	Gates Summerton Hunt Club	Gates	Private Club	4,500
9.	Gatesville Hunt Club	Gatesville	Private Club	6,200
10.	Old Buck Hunt Club	Gates	Private Club	5,000
11.	Sunbury Hunt Club	Sunbury	Private Club	4,000
12.	Water Swamp Hunt Club	Hobbsville	Private Club	7,000
13.	Hungary Farmers Country Club (Golf Course)			

*Hungary Farmers Country Club (Golf Course) was not given a BOR Classification.

CURRENT PLANS, POLICIES AND REGULATIONS

This section contains a list and description of previous planning documents prepared for Gates County.

Water and Sewer Study

A Comprehensive Water and Sewer Study for Gates County was prepared in 1970 by Rivers and Associates of Greenville, N. C. The purpose of the study was to identify the county's water and sewer needs over the next twenty years and to recommend a plan by which these facilities might be provided.

To date no construction has taken place nor have financing arrangements been finalized. The county is updating the 1970 cost estimates as a basis for future action.

Consumer Characteristics

A survey entitled Comprehensive Consumer Characteristics was prepared in 1969 by the Gates County Development Commission in cooperation with East Carolina University's Regional Development Institute. The study was aimed at identifying certain consumer needs as a guide to future economic development activities.

Impact '76

This report was prepared by the Gates County Extension Service in 1972. It was designed to increase farm income through production and marketing programs; improve economic opportunity and the quality of life in rural areas; protect and improve the quality of the environment; facilitate the development of youth; and help families better develop and manage personal and family resources.

Mobile Home and Mobile Home Park Ordinance

This ordinance was adopted by the Gates County Board of Commissioners in 1973. The purpose of the ordinance is to establish minimum development standards to be adhered to before the mobile home park is developed in order to protect public health, safety, and welfare. The County Planning Board reviews plats, and the County Manager is the enforcement officer.

An Appraisal of Potential for Outdoor Recreation, Gates County, N. C.

This study rated the various types of outdoor recreation potential available for possible development. It was prepared in 1974 by the Soil Conservation Service of the U. S. Department of Agriculture.

The Gates County Thoroughfare Plan

This plan does not propose any construction of new rights-of-way or change in the existing rights-of-way during the planning period.

Minimum standards for septic tank installations are being enforced by the County Sanitarian.

CONSTRAINTS

The following analysis has been made of the general suitability of the undeveloped lands within the Gates County planning area for development with consideration given to the following factors:

- 1) Physical Limitations for Development;
- 2) Fragile Areas;
- 3) Areas with Resource Potential.

These factors were analyzed, and where possible mapped, based upon the best information available.

PHYSICAL LIMITATIONS FOR DEVELOPMENT

An identification is made of areas likely to have conditions making development costly or causing undesirable consequences if developed. The following areas are required to be identified:

Hazard Areas

- (1) Man-made (for example, airports, tank farms for the storage of flammable liquids, nuclear power plants);
- (2) Natural, including:
 - (a) Ocean erodible areas
 - (b) Estuarine erodible areas
 - (c) Flood hazard areas
 - Riverine (floodplains and floodways)
 - Coastal floodplains

Areas With Soil Limitations

- (1) Areas presenting hazards for foundations;
- (2) Shallow soils;
- (3) Poorly drained soils;
- (4) Areas with limitations for septic tanks including both:
 - (a) areas that are generally characterized by soil limitations, but within which small pockets of favorable soils do exist; and
 - (b) areas where soil limitations are common to most of the soils present.

Sources of Water Supply

- (1) Groundwater recharge areas (bedrock and surficial);
- (2) Public water supply watersheds;
- (3) Wellfields.

Where Slope Exceeds Twelve Percent

FRAGILE AREAS

An identification is made of those areas which could easily be damaged or destroyed by inappropriate or poorly planned development, such as:

- (a) Coastal Wetlands
- (b) Sand Dunes along the Outer Banks
- (c) Ocean Beaches and Shorelines
- (d) Estuarine Waters
- (e) Public Trust Waters
- (f) Complex Natural Areas
- (g) Areas that Sustain Remnant Species
- (h) Areas Containing Unique Geologic Formations
- (i) Registered Natural Landmarks
- (j) Others (such as wooded swamps, prime wildlife habitats, scenic and prominent high points, etc.)
- (k) Archeologic and Historic Sites

AREAS WITH RESOURCE POTENTIAL

- (a) Productive and unique agricultural lands, including:
 - Prime agricultural soils
 - Potentially valuable agricultural lands with moderate conservation efforts
 - Other productive or unique agricultural lands.
- (b) Potentially valuable mineral sites;
- (c) Publicly owned forests, parks, fish and gamelands, and other non-intensive outdoor recreation lands;
- (d) Privately owned wildlife sanctuaries.

APPLICABILITY TO GATES COUNTY

Land use constraints that are evident in many counties are not evident in Gates County. This fact is obvious from reviewing the list of fragile areas to be identified by all coastal counties. Those applicable to Gates County follow:

Hazard Areas: Gates County contains no "hazard areas" other than the floodplain of the Chowan River.

Soils Limitations: Soils present considerable limitations for the use of septic tanks and building foundations throughout the county. A soils association map is presented in this section along with an explanation of the limitations of each association.

Source of Water Supply: These are discussed under the sub-section entitled "Geology and Ground Water."

Steep Slopes: There are no significant areas with slopes in excess of 12 percent. These exist only in very narrow strips along stream banks.

Wetlands: There are no coastal wetlands in Gates County.

Sand Dunes along Outer Banks: Gates County is landlocked.

Ocean Beaches and Shorelines: Gates County is landlocked.

Estuarine Waters: The Chowan River is estuarine, as are several smaller streams. These are listed in the "Areas of Environmental Concern" section.

Public Trust Waters: Virtually all surface waters in the County are public trust waters.

Complex Natural Areas: Wooded swamps are evident along many streams in Gates County. The Dismal and Chowan Swamps are complex natural areas; however, the citizens of Gates County do not wish to designate the Dismal Swamp as a Conservation Area.

Areas that Sustain Remnant Species: The red-cockaded woodpecker occurs in stands of mature loblolly pine. The southeastern shrew, swamp short-tailed shrew and southern hog lemming occur in the Dismal Swamp or eastern portion of the county. All of these are classified endangered species. The endangered short-nosed sturgeon and the Atlantic sturgeon probably occur in the Chowan River, however, occurrence records are scarce for these species.

Unique Geological Formations: There are no unique geological formations in Gates County.

Registered Natural Landmarks: There are no Registered Natural Landmarks in Gates County.

Archeological and Historic Sites: Elmwood Plantation, located near Vivian, is listed in the National Register of Historic Places. The Gates County Courthouse, located in Gatesville, has been approved for listing in the Register by the North Carolina Historical Commission.

Productive and Unique Agricultural Lands: The use of land for agriculture was discussed in the "Existing Land Use" sub-section. Soil factors which have importance for agriculture are discussed in this section, "Constraints." Research conducted in the preparation of this plan revealed no evidence of any "unique" agricultural practices or potentials.

Mineral Sites: Research conducted in the preparation of this plan revealed no evidence of potentially valuable mineral deposits in the county.

Publicly-Owned Forests, Parks, etc.: Publicly-owned forests, parks, fish and gamelands are illustrated on the Existing Land Use Map. They include Merchants Millpond, Chowan Swamp State Park, Chowan Swamp Gameland and a Union Camp Land Grant to the University of N. C. located in the Southeast section of the County.

Privately-Owned Wildlife Sanctuaries: Privately-owned wildlife sanctuaries and other outdoor recreational areas are illustrated on the Existing Land Use Map.

PHYSICAL LIMITATIONS

Climate

The climate of Gates County is oceanic - that is, it is affected by the proximity of the Atlantic Ocean. The winters, as a rule, are mild, but a few days occur during the winter when the temperature stays below freezing. The summers are long and hot. The average length of the frost-free season is 210

days, from April 3 to October 30, but killing frosts have occurred as late as April 26 and as early as October 11. The average temperature for the year is 60.3 degrees.

Rainfall is well distributed throughout the year, the greater part falling during the growing season. The fall months are usually dry, thus allowing the farmers good weather in which to harvest their crops. The abundant moisture and length of the growing season render Gates County climatically a good agricultural region. Cover crops and a few hardy vegetables can be grown throughout the winter, and farm labor can be carried on at all times of the year. The average rainfall for the year is 49.13 inches.

Topography and Drainage

The topography of Gates County ranges from level to undulating and gently rolling, interspersed with many small swamps and structural depressions. The gently rolling topography occurs mainly along the Chowan River, the Virginia State line and along the Dismal Swamp. The western, north-central and south eastern sections of the county are generally flat and include a number of swamps. Elevations range from 14 feet along the Chowan River and the Great Dismal Swamp to 78 feet above sea level in the central-northern section. The greater part of the county lies approximately 40 feet above sea level.

With the exception of Bennett's Creek, which drains into the Chowan River, there are no large streams within the county. Drainage is largely effected by short, meandering streams that feed the large swamps bordering much of the county. The largest of these are the Great Dismal Swamp in the east and the Chowan Swamp in the south and west. The drainage divide separates the county into two drainage areas --- Pasquotank River Basin to the east and the Chowan River Basin to the west.

Geology and Groundwater

The study of the geology of an area is essential to the study of its ground water resources. Geologic formations of high permeability may readily store and transmit ground water, whereas geologic formations of low permeability may retard the movements of ground water. Thus, the movement of ground water depends, among other factors, upon the size, shape, and physical characteristics of the geologic formations. In addition, ground water may dissolve from or deposit chemicals in the material through which it moves. Thus, the chemical quality of ground water is dependent upon the geology of an area.

The entire county is mantled by sands and clays of Quaternary age, ranging in thickness from 15 to 40 feet. This material, composed of light-colored iron-stained sands and clays, occurs at elevations ranging from nearly 80 feet in the northwestern part of the county to less than 20 feet in the southeastern part of the county. Several former beach ridges are developed in this material, particularly in a northeast direction from Hobbsville and Sunbury. The height of these fossil beach ridges is everywhere less than 10 or 15 feet.

Underlying the surficial material are clays, sands, and shell beds of the Yorktown formation of late Miocene age. Individual beds within the formation are lenticular and cannot be traced from well to well in the subsurface. In any one locality the Yorktown formation consists of a blue-gray marine clay with subordinate occurrences of lenticular sand and shell beds. In a recently drilled well (1956) at Gatesville the Yorktown formation was 126 feet thick. It is thought that the formation is somewhat less than 100 feet thick west of Gatesville, and that it is not more than 150 feet thick east of Gatesville.

Underlying the Yorktown formation in central parts of the county are deposits of middle Miocene age. The deposits are as much as 30 feet thick in the vicinity of Gatesville. The deposits of middle Miocene age in Gates County were not deposited in the same basin of deposition as deposits of comparable age in Beaufort and Washington Counties to the south.

West of Gatesville no subsurface information is presently available to indicate the presence of middle Miocene deposits. These deposits are probably absent west of Gatesville.

Underlying the middle Miocene deposits in the central part of Gates County and the Yorktown formation in western and eastern Gates County are deposits of Paleocene age, the Beaufort formation. Euhedral crystals or authigenic pyrite occur in sufficient abundance so as to give well cuttings a metallic sheen.

The thickness of the Beaufort formation in Gates County increases from west to east across the county. In the central part of the county, according to a study of well cuttings, indicate that the formation is more than 300 feet thick in the coastal part of the county, and no more than 150 feet thick in the western part. Examination of incomplete samples from several wells suggests that the formation may be more than 400 feet thick in the eastern part of the county.

Underlying the Beaufort formation within the county are sediments of Late Cretaceous age, the Peedee formation. No wells have been drilled deep enough in this area to pass entirely through the Peedee formation and, therefore, no information is available regarding its total thickness. According to LeGrand and Brown, the top of the Peedee formation lies about 300 feet below sea level in the western part of the county and about 700 feet below sea level in the eastern part of the county. Older Cretaceous formations underlie the Peedee formation throughout the county.

The Town of Gatesville is the only area within the county that has a public water system. Remaining domestic supplies are obtained from wells, and as many as 7 or 8 families often obtain their water supply from a single well.

Surficial sands of Quaternary age and near-surface shell and sand beds of the Yorktown formation are tapped by large numbers of dug and driven wells that range in depth from 10 to 60 feet. The yield from this type of well ranges from several to 20 gpm. Sand and shell beds in the Yorktown formation and middle Miocene strata are capable of yielding small to copious supplies of water throughout the county.

Jetted and drilled wells obtain water from the Beaufort formation and the upper beds of the Peedee formation at depths of as much as 300 feet in the western part of the county and at depths slightly more than 600 feet in the eastern part of the county. Such wells, rarely greater than 4 inches in diameter, yield 5 to 50 gpm throughout the county.

Water occurring at depths greater than 40 to 50 feet throughout the county is under artesian pressure and will rise to within 5 to 30 feet of the land surface at most places. Flowing wells are common along the low land bordering the Chowan River, and several flows occur in and near Gatesville.

The chemical quality of the water is adequate for most domestic purposes. Water from the shallow sands is soft but may be corrosive and may contain objectionable quantities of iron. Water from the deeper aquifers is soft sodium bicarbonate water. Water from the Paleocene and Cretaceous aquifers, particularly in the vicinity of Gatesville and Sunbury, contains excessive amounts of fluoride, as much as 6 to 8 ppm, but otherwise the water is of acceptable quality. In the vicinity of Hobbsville, brackish waters occur at a depth of about 600 feet.

Stream Classification

Rivers and streams of North Carolina are classified by the N. C. Department of Natural and Economic Resources according to their existing or contemplated best usage. The classifications are based on extensive studies of stream characteristics, established water quality standards, and public hearings held within the area.

The streams of Gates County have "swamp water" characteristics. These are characterized by high coloration, low pH and dissolved oxygen due to decay of organic substances, and sluggish flow.

The following is a brief explanation of the classification system as to best usage and conditions related to best usage.*

1. Class B Waters

- (a) Best Usage of Waters: Bathing and any other best usage except as a source of water supply for drinking, culinary or food-processing purposes.
- (b) Conditions Related to Best Usage: The waters, under proper sanitary supervision by the controlling health authorities, will meet accepted standards of water quality for outdoor bathing places and will be considered safe and satisfactory for bathing purposes. Also, suitable for other uses requiring waters of lower quality.

2. Class C Waters

- (a) Best Usage of Waters: Fishing, boating, wading and any other usage except for bathing or as a source of water supply for drinking, culinary or food-processing purposes.
- (b) Conditions Related to Best Usage: The waters will be suitable for fish and wildlife propagation. Also, suitable for boating, wading, and other uses, requiring waters of lower quality.

3. Class D Waters

- (a) Best Usage of Waters: Agriculture, industrial cooling and process water supply, fish survival, navigation, and any other usage, except fishing, bathing, or as a source of water supply for drinking, culinary or food processing purposes.

*Water quality standards applicable to each class are omitted here because of length and technical detail; however, the applicable water quality standards for each classification can be obtained from the Department of Natural and Economic Resources, Washington, NC.

- (b) Conditions Related to Best Usage: The waters without treatment and except for natural impurities which may be present therein will be suitable for agricultural uses and will permit fish survival. The waters will also be usable after special treatment by the user as may be needed under each particular circumstance for industrial purposes, including cooling and process waters.

4. Class D SWP Waters

Same as #3 above except that swamp waters may have a pH as low as 4.3. The pH for Class D streams generally range between 6.0 and 8.5.

MAJOR STREAMS AND CLASSIFICATIONS
IN GATES COUNTY

Chowan River Basin:

Chowan River	C
Somerton Creek	C
Beaverdam Creek	D
Duke Swamp	C
Goodman Swamp	D
Laster Jordan Branch	D
Flat Branch also known as Jones Swamp	D
Hacklan Branch	D
Buckland Mill Branch	D
Barnes Creek	C
Spikes Creek	C
Island Creek	C
Sarem Creek	C
Bennetts Creek	C
Gum Branch	C
Chowan River	B
Middle Swamp	D
Lassiter Swamp	C
Harrell Swamp	C
Raynor Swamp	C
Catherine Creek	C
Trotman Creek	C
Warwick Creek	C

Pasquotank River Basin:

Taylor Swamp	D swp
Jones Millpond	D swp
Folly Swamp	D swp
Goose Creek	D swp
Jones Pond	D swp

SOILS

Basic to any long-range planning program is a knowledge of the soils, their productive capabilities and their suitability for supporting various urban land uses. This sub-section provides interpretations of the soils of Gates County with respect to both agricultural productivity and suitability for selected urban land uses.

For purposes of interpretation, the soils of Gates County were grouped into seven interpretive groups. These groupings were based on similarity of soil characteristics and degrees of limitations the soils have for specific uses.

Soils occurring together in a characteristic and repeating pattern constitute a general soil area or soil association. An association consists of two or more principal soils and at least one minor soil which may be quite similar to or quite different from each other. Although closely associated geographically, the soils in an association may differ in their suitability for agricultural and non-farm uses.

Soil ratings are based on the characteristics of the soils and related costs of developing the land area for a specific use. Any soil area may be developed for any use if the capital is available to perform the necessary modifications of the land area in question; however, one of the main purposes of planning is to identify and make key use of soils in order to avoid unnecessary investment in poor soils. The ratings used in this report are listed and defined as follows:

DEFINITIONS OF SOIL LIMITATIONS

None to Slight ---	Soils have properties favorable for the rated use. Limitations are so minor that they can be easily overcome. Good performance and low maintenance can be expected from these soils.
Moderate -----	Soils have properties moderately favorable for the rated use. Limitations can be overcome or modified with planning, design, or special maintenance.
Severe -----	Soils have one or more properties unfavorable for the rated use. Limitations are difficult and costly to modify or overcome, requiring major soil reclamation, special design, or intense maintenance.

Caution should be exercised in using this information for detailed or small area interpretations. The scale on which the soil resources were recorded is such that it is not possible to evaluate small tracts of land in any one geographic area of the county. As an example, an area on the map of 15,000 acre size may be listed as "unsuitable" for residential development without public sewer; however, within this area there may be several hundred acres of soils that would be suitable for residential development with septic tank disposal systems. These interpretive maps should be used as guides to evaluate the dominant suitability of land areas for specific land use. A soil survey of medium or high intensity would be required to determine the use suitability for small tracts of land. The scale limitations of the soil survey used for these interpretations does not, however, eliminate its usefulness for planning and implementation of a sound land use policy for the County. For example, if the County Planning Board was interested in locating a suitable development site, then the chances for finding satisfactory sites would be significantly higher in soil areas designed as "suitable" than they would be in soil areas designated as "unsuitable."

A General Soil Map appears on the following page which shows the location and extent of the seven soil associations in Gates County. In addition, immediately following the General Soil Map is a soil interpretative table giving the suitability of the principal soils for general agriculture and woodland. It also gives their limitations for non-farm uses, such as septic tank absorption fields, foundations for light industry or recreation areas.

The seven soil associations as mapped in Gates County are described as follows:

SUMMARY DATA
SOIL SUITABILITY FOR URBAN DEVELOPMENT

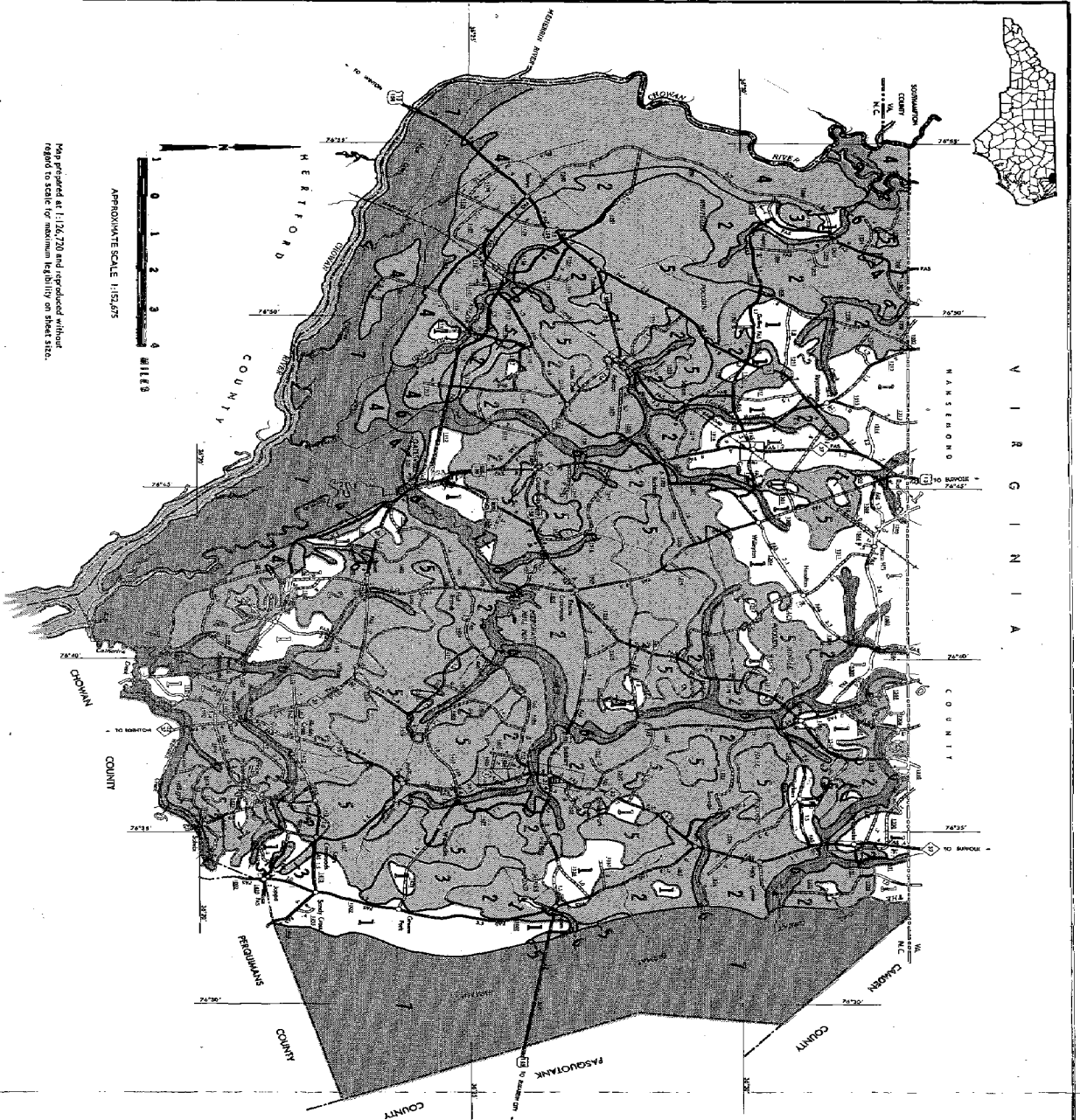
SOIL GROUP	TYPE OF DEVELOPMENT		
	RESIDENTIAL	INDUSTRIAL	RECREATION
1	Slight	Moderate	Slight
2	Severe	Severe	Moderate
3	Severe	Severe	Severe
4	Moderate	Moderate	Moderate
5	Severe	Severe	Severe
6	Severe	Severe	Severe
7	Severe	Severe	Severe

LEGEND

- 1 WARHAM-NORFOLK-GOLDSBORO ASSOCIATION: Well drained to moderately well drained soils with gray sandy surfaces over friable, yellowish brown or mottled yellowish brown and gray sandy clay loam subsoils.
- 2 LENOR-GRAVEN-DUNBAR ASSOCIATION: Somewhat poorly drained to moderately well drained soils with gray sandy surfaces over firm to very firm sandy clay or clay subsoils.
- 3 PLUMMER-TORHUNTA-PORTSMOUTH ASSOCIATION: Poorly to very poorly drained soils with dark gray to black surfaces over friable, gray sandy loam to sandy clay loam subsoils.
- 4 LAKELAND-CHIPLEY-PACOTOLUS ASSOCIATION: Well drained and moderately well drained soils with thick sandy surfaces and friable, gray sandy subsoils.
- 5 COXVILLE-MYATT-RAINS ASSOCIATION: Poorly drained soils with gray friable surfaces over gray and yellow friable to firm sandy clay loam or sandy clay subsoils.
- 6 JOHNSTON-BIBB ASSOCIATION: Poorly and very poorly drained soils with black to dark gray sandy surfaces and gray, stratified sands, sandy loam or silt substance layers. They are subject to flooding for brief to long periods of duration.
- 7 POWDER-DOROVAN-DARE ASSOCIATION: Very poorly drained organic soils with thick organic surfaces (O-horizon) over mineral substance layers ranging from sands to clays. They are inundated throughout most of the year in normal seasons.

Note: This General Soil Map is suitable for broad planning purposes only. For more detailed planning on individual tracts of land, a detailed soil survey is needed.

GENERAL SOIL MAP
TENTATIVE, SUBJECT TO CHANGE
GATES COUNTY
NORTH CAROLINA
U.S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE
RALEIGH, NORTH CAROLINA



EXISTING COMMUNITY FACILITIES

Educational Facilities

Gates County's educational facilities include four elementary schools, one high school, one junior high school and six public kindergartens. There are no private or parochial schools located in the county. Vocational education programs are included in the high school curriculum for students entering into the labor force upon graduation.

Gates County students have access to a number of institutions of higher education. The College of the Albemarle in Elizabeth City, Chowan College, a junior college located at Murfreesboro, is only 23 miles from Gatesville. Elizabeth City State College at Elizabeth City is a four year college and only 35 miles from Gatesville. A technical institute, Roanoke-Chowan Technical Institute, is approximately 25 miles from Gates residents.

Transportation

The county's present highway needs are met by U.S. Highways 13, 158, and N.C. 32, and a number of state secondary roads which criss-cross the county. These roads provide access to all parts of the county and connect the county with the nearby regional trade centers of Elizabeth City and the Norfolk-Suffolk metropolitan area. U. S. Highway 13 provides the primary north-south route and connects the western section of the county with Norfolk. N. C. 32 links the eastern section of the county to Norfolk. U.S. 158 which intersects U.S. 13 divides the county approximately in half and provides an east-west arterial linking the county to Elizabeth City and the Outer Banks of North Carolina.

Bus Service: There are no regular scheduled bus services in Gates County.

Motor Freight: Five motor freight carriers are certified to stop in the county. United Parcel Service makes deliveries in the county.

Rail Transportation: Railroad transportation consists of the mainline of the Seaboard Coast Line from Rocky Mount to Norfolk, Virginia. This line is also leased by the Southern Railroad and has several loading points in the county.

Air Transport: The nearest commercially-served airports are located in Elizabeth City and Norfolk, Virginia. Charter services are also available at both. Edenton Municipal Airport offers maintenance and charter flights from a private aviation service.

Medical Facilities

The County's medical facilities are limited. Gates County's medical facilities consist of a County Health and Welfare Department. The Health Department also employs a full-time Sanitarian. There are no dentists in the county.

There are numerous medical facilities within a 30 mile radius of the center of the county. There are two hospitals within this radius (totaling 151+ beds), 38 physicians, and 14 dentists.

Police and Fire Protection

Police protection is provided primarily by the County Sheriff's Department which consists of one deputy and the Sheriff. The Department has one patrol car. There is no municipal police protection. The only police services provided in the county, other than the Sheriff's Department, is by the State Highway Patrol. Fire protection is provided by the fire departments in Gatesville and two rural fire departments (Gates and Sunbury). The Gatesville fire department is supported by 18 volunteer firemen and two 500 GPM pumps.

Rescue Services

The Gates County Rescue Squad was formed in 1964 at Eason's Crossroads. In 1972 the building was enlarged in order to house the expanding service. Prior to 1964 county residents had to rely upon surrounding counties for all emergency ambulance services.

The Gates County Rescue Squad owns two ambulances. One is a standard ambulance and the second is termed a "crash truck" which is equipped with tools needed to retrieve and treat automobile crash victims. Both ambulances are equipped with modern medical gear, including oxygen, standard splints, inflatable splints, traction splints, a "spine board", an orthopedic structure designed to splint the entire body, dressings and bandages.

Solid Waste Collection and Disposal

Approximately 40 refuse containers are placed at strategic points throughout the county. Residents are allowed to dispose of household garbage into these containers. Each container is dumped twice weekly and carried to a central site to be buried. Open dumps presently being operated by municipal, community, or private groups are closed and covered with two feet of soil. These operators are allowed to use the county landfill.

Water Transportation

The Chowan River is used by barge traffic carrying pulpwood. So far, Gates County is not making use of this potentially important and inexpensive means of transportation. With the exception of the marina near Winton, there are no commercial developments on the river.

Telephone

Gates County is served by two telephone companies, the Carolina Telephone and Telegraph Company, serving the western half, and the Norfolk and Carolina Telephone Company serving the eastern half of the county.

Post Offices

Post offices in the county are located in the following communities: Eure, Roduco, Gates, Gatesville, Sunbury, Corapeake and Hobbsville.

Radio and TV

There are no radio or TV stations located in the county. However, there are three AM stations within a 30-mile radius and one FM station 58 miles away. Television reception is excellent from a number of North Carolina and Virginia stations.

Newspapers

There is one weekly paper, The Gates County Index, published in Gatesville.

Electricity

Electric power is furnished in Gates County by the Virginia Electric and Power Company and the Roanoke Electric Membership Corporation.

Gas Lines

There are no natural gas lines in Gates County. Lines are located within 15 miles in Hertford County. Should the people of Gates County desire natural gas, these lines could be extended to serve the county.

Fuel Oil

Fuel oil is available to county residents using this type of fuel.

Sanitary Sewer

There are no sanitary sewer systems in Gates County.

Water Supply and Distribution

The only water distribution system in the county is the Gatesville Municipal system. Installed in 1971, it has approximately 160 connections. The system is supplied by two deep wells with a combined pumping capacity of 200 gallons per minute. A 150,000 gallon elevated tank provides storage and maintains pressure in the system. Fire hydrants are located throughout the system.

PUBLIC PARTICIPATION ACTIVITIES

LAND USE COMPATIBILITY PROBLEMS

Many of the major land use problems that are prevalent in other coastal counties are not so evident in Gates County. This is primarily due to the distance of Gates County from the sounds and ocean, and the county's landlocked characteristics. Intensive land development in Gates County has been very limited in the past and little is expected due to a projected population decline in years to come. County citizens therefore rated land use planning as the lowest priority on a list involving ten county needs.

A rapid influx of mobile homes has been identified by the Citizens Advisory Board as one of the major land use issues confronting the county. Recently, minimum standards for lot size, park development, tie-down requirements, etc., were adopted. Only through continued enforcement of the existing regulations will minimum standards be implemented to assure a high degree of health, safety, and protected land values to mobile home dwellers, and to all citizens affected by the mobile home influx.

The use of individual wells and septic tanks in areas of high density is a threat to the health of some citizens of the county, particularly where well depths are shallow. Such areas as Eure, Roduco, Eleanor's Crossroads, Corapeak, Sunbury and the Hobbsville/Mintonville area presently do not have public water or sewer services. To enhance the health, safety, and welfare of residents in these areas, it may be necessary to establish water corporations or sanitary districts in order to obtain public water systems that will eliminate the potential danger.

Gates County has not felt the "growth pains" that other coastal counties are enduring as a result of recreation oriented development, urban spillover, and the accompanying rapid development.

With a declining population and a seasonal population that is insignificantly low, the demand upon public services and natural resources has been minimal. This has been the trend in Gates County for decades and is projected by the citizens to continue. The county citizens do not believe urban spillover from the Virginia metropolitan areas will occur so intensely that it will present a problem during the planning period.

ALTERNATIVE POLICIES

The goals and policies adopted by the county citizens were formed as a result of various methods used to measure citizen views.

A set of alternative goals may be established for various public service categories based upon the results of the citizen survey/questionnaire that was distributed throughout the county. They are as follows:

Law Enforcement: It is widely felt that drugs are a problem and that more public funds should be spent to control illegal drugs and organized crime.

Environmental Considerations: Most respondents believe agricultural pollution should be regulated. They are willing to pay a high cost for commodities if it means no pollution. Although many would like to see more job opportunities expand into the Gates County area, they would not like to see the environment harmed in the process.

Land Use Planning: 93% of the questionnaires believe future development should be planned. Most believe that growth should occur at a slow, controlled rate. People should not be permitted to do anything they want with their land, no matter how it affects their neighbors. The majority believe that there is danger in rapid development and mobile home development should be controlled.

Educational Facilities: The adequacy of school facilities is not perceived to be a problem. Most believe the kindergarten program is adequate. Vocational and adult education programs are not considered a problem.

Community Facilities: Garbage collection, water and sewer services, libraries and transportation system were judged by the respondents to be adequately meeting their needs.

Recreation: Recreation facilities are not considered adequate. Most believe more money should be spent to develop public recreation facilities and programs, public parks, and tourist attractions.

Industrial Development: Employment opportunities are inadequate and unemployment is a problem. Industrial development is considered to be inadequate and most believe more industrial development would improve the quality of life. Most believe more funds should be spent for industrial development.

Medical Facilities: Medical facilities and staff are inadequate. More funds should be appropriated in an effort to alleviate this short-fall.

The goals and policies and alternative goals and policies derived from the citizen participation efforts served as a guide for land classification.

Citizens at the public meetings expressed the desire to maintain Gates County's rural and small community characteristics. As a result of this 'slow growth' attitude and a declining population trend, the County citizens limited the classification of land to Community, Rural, and Conservation. A discussion of each follows later in this report.

POLICY STATEMENT

According to the Guidelines adopted by the Coastal Resources Commission, "The basic policy decisions in any effective program of county-wide land use planning must be made within the county -- by the people familiar with local tradition, local problems and local desires for the future."

After conducting a series of public meetings, questionnaire distribution, and township meetings, the Planning Board proposed the following policy statements to be adopted by the Board of County Commissioners.

- 1) Law Office: there is a definite need for a full-time, qualified enforcement staff including an immediate need for at least one additional deputy.
- 2) Environmental Considerations and Land Use Planning -- they should be covered by the land use plan.
- 3) Education: there is a need for a larger gymnasium in the school system and a need for an auditorium sufficient in size to accommodate school and county activities.
- 4) Community facilities: a need for a child care center for working parents.
- 5) A need for a county-wide water system.
- 6) Recreation: need for supervised programs for youth.
- 7) Industrial Development and Employment: a need for a continued effort to attract desirable industry. A need for a professional industry hunter.
- 8) Medical Facilities: a desperate need for doctors, and a clinic to serve Gates County.
- 9) Social Services.
- 10) Cultural Activities: a need for library facilities.

Based on the results of the meetings, it appears that the categories should be numbered as follows:

- 1) Law Enforcement
- 2) Medical Facilities
- 3) Community Facilities
- 4) Educational Facilities
- 5) Recreation
- 6) Cultural Activities
- 7) Social Services
- 8) Industrial Development and Employment
- 9) Environmental Considerations
- 10) Land Use Planning

PUBLIC PARTICIPATION SUMMARY

The effort to achieve public participation during the planning process in Gates County was accomplished primarily through the efforts of the County Planning Board and the 42 member Citizens Advisory Board. The planner provided technical assistance, data, and materials. The Planning Board and Advisory Board, through various methods, contacted the public and in turn relayed this input to the planner for incorporation into the plan.

The Gates County Commissioners instructed the Planning Board to do all that was necessary to assure optimum citizen participation and input throughout the process. The Planning Board appointed the 42 member Citizens Advisory Board to distribute questionnaires, make individual contacts throughout their respective townships and to give input into the planning process.

Combination workshops and public meetings have been held to assess public needs and to acquire input. Workshops were held with the members of the Advisory Board to explain CAMA. Township meetings were held as a combination workshop and public participation sessions. Later, this group held similar township meetings once again to explain CAMA to new participants and to receive input concerning the questionnaire results. A meeting of the Planning Board was held to assess the questionnaire results and to assess the input from the

township meetings regarding the questionnaire results. The assessment was written in the form of alternative policy statements concerning various categories of public service.

The County school system's aide in distributing questionnaires was helpful toward educating the public about CAMA and soliciting citizen input.

The questionnaires instructed that the head of household was to fill out the form. Out of 2,396 heads of households in the County, 564 or 24% filled out a questionnaire and returned it for tabulation. The Planning Board and Citizens Advisory Board members were actively involved with personal contact conversations within their community in an effort to acquire input from those who did not attend a meeting or fill out a questionnaire.

The survey questionnaire sought citizen ideas regarding the following public service categories: (1) Law Enforcement; (2) Environmental Considerations; (3) Land Use Planning; (4) Educational Facilities; (5) Community Facilities; (6) Recreation; (7) Industrial Development and Employment; (8) Community Responsibility and Pride; (9) Medical Facilities; (10) Social Services; and (11) Cultural Activities.

Out of the total number of questionnaires returned, 60.9% were completed by males, 55.2% were completed by non-white persons, 29.0% of the respondents were presently living on a farm, and 49.4% had a high school education or less. This is evidence that the returned questionnaires were diversified and represented a diversified cross-section of the county.

Public participation in Gates County can be assessed as adequate. Major efforts by local governing officials, Planning Board and Advisory Board members, and media have made every effort to inform the public of meetings to be held and results of meetings involving CAMA. If public turnout at any meeting was inadequate, it was not because the effort to inform was not made.

ESTIMATED DEMAND

POPULATION AND ECONOMY

Population in Gates County will continue to decline as it has since 1940.

There is a trend towards the out-migration of the child-bearing productive age group in both races. If the population is to increase and/or maintain itself at a specific level, in-migration must be intensified and out-migration must be reduced. Both efforts must be concentrated primarily around the child bearing, productive age groups. To accomplish this, job opportunities and community services must be increased within the county and neighboring counties that are in easy commuting distance. Persons in this age group evidently are not attaining the livelihood that they can be obtaining elsewhere.

The dependent population, persons ages 64 and over plus persons under age 18, will continue to increase in number while the productive age group (ages 18-64) will continue to leave the county. Unless more of the productive age group remains in the future, the overall level of material well-being for the population will decline, i.e., services to sustain the elderly while the tax services to finance that support is being depleted.

The median family income of Gates County families improved substantially in the last decade. The percent of families considered to be poverty stricken decreased greatly.

The number of persons commuting out of the county for employment has increased for Gates County during the past decade. The gradual disappearance of small farms has forced a flight to the city and towns for jobs by rural residents. The major metropolitan areas have continued to draw workers by offering higher salaries. The loss of workers to Virginia is likely to continue unless there are some developments in the northeastern counties which

create more jobs for residents.

There will be no apparent reasons why the land and water resources of Gates County cannot sustain the projected population, since a decline is projected.

FUTURE LAND NEEDS

The ten year population projection was used to determine future land needs in Gates County. The projection portrays a declining population. As a result there were no areas delineated to develop in the future as Developed or Transition. The Citizen Planners designated lands as Community that already possess these characteristics. It is not expected that these areas will change in character during the ten year planning period. The same principal was used to determine the Rural land classification.

COMMUNITY FACILITIES NEEDS

When the population of an area is projected to increase, a subsequent increase in the demands for public services should be anticipated. The demands for increased services are particularly noteworthy for transportation, schools, and water-sewer facilities. Although the population of Gates County is projected to decline, the citizen planners of the county have identified needed facilities.

Educational Facilities

Table XIII is a list of public schools, the average daily membership (ADM) for the first part of the school year 1975-76, and the capacity of each building facility to house additional students. All schools are presently operating within the capacity range; however, it has been recommended that the Sunbury School be phased out and rebuilt due to inadequate construction, as pointed out by the Architect/Engineer's evaluation.

TABLE XIII
SCHOOL FACILITIES AND UTILIZATION

School	Architect/ Engineer's Evaluation of Long- Range Adequacy	Average Daily Membership (ADM)	Capacity Range	Committee Recommendations for Long Range Use
Gates Sr. High	Adequate	522	480-600	Continue to Use
Central Jr. High	Adequate	396	400-500	Continue to Use
T. S. Cooper	Adequate	236	200-250	Continue to Use
Sunbury	Inadequate	309	300-375	Phase out of Use
Gatesville (Includes Buckland School)	Adequate	659	620-775	Continue to Use

Highway Facilities

According to the Department of Transportation, the practical capacity for a two-way highway is between 5,700 - 8,200 vehicles per day. A recent traffic count of the Gates County transportation network by the Department of Transportation indicates that there are no public transportation routes presently exceeding the maximum capacity.

Water Services

A proposed county water system would serve almost the entire county, with the exception of Gatesville which has an existing water system.

Water mains will end where diminishing population density makes it economically unfeasible to continue service.

It is anticipated that additional homes and small commercial establishments will be established in the proposed area of service. It is also possible that the area would be attractive to industries.

A public water system is needed in the area because individual private wells are shallow, producing hard, high-iron content water. A high chloride content is also a problem in some parts of the county. Most wells are subject to pollution from nearby septic tanks and privies. The condition is made worse by the low, flat elevations, high water tables, and swamp areas. The water presently used stains and deteriorates plumbing fixtures, stains clothes, and is unpleasant in taste and odor. This creates a serious health hazard. Many of the residents have installed individual water softening and iron removal equipment. The cost of maintaining this equipment runs from \$10 to \$15 per month, requiring continuous maintenance. Added to this is the cost of operating and maintaining the pumping equipment.

Industrial growth, which is very vital to the economical growth of an area, is somewhat limited in the choice of plant location. With a county-wide system, having elevated tanks to provide an adequate water supply with adequate pressure, potential industry would have a much better choice of where to locate their plant sites. A public water system also encourages home building along the system mains.

The proposed project includes the construction of (1) a water distribution system, (2) one 900 GPM water treatment plant, (3) three 500 GPM deep wells, and (4) two 250,000 gallon elevated storage tanks. Should a future industry require additional pressure to meet insurance requirements, then additional elevated tanks or booster pumps can be added to the system to meet their requirements. Although the system is not designed for complete fire protection, fire hydrants are proposed in the more populated areas to provide water to provide protection and for filling water tankers. Hydrants and blow-off valves are also proposed to flush dead-end lines.

It is also proposed that the system be connected to the existing Gatesville system and Chowan County System through a buy-sell agreement.

Total estimated project cost would be \$3,450,000.00. A detailed breakdown of estimated cost may be reviewed in the appendix.

The construction of the Gates County water system appears economically feasible with the aid of a FHA loan and grant, a State grant, a Coastal Plains grant, and a favorable user sign-up. It is the recommendation of Rivers and Associates that the County apply to the Farmers Home Administration for a loan of (\$1,417,000.00) and a grant of (\$1,600,000), to the N. C. State Board of Health for a grant of (\$83,000.00) under the Clean Water Bond Act of 1971, and a grant from the Coastal Plains Regional Commission in the amount of (\$350,000).

In the event that grants are not available, and that total user sign-up is not sufficient, the system could be constructed in phases, with each phase coordinated so that the goal of a county-wide water system could be achieved. The construction of each phase would depend on the location of the greatest number of signed users and the availability of funds.

Sewage Facilities

There are no existing sewage treatment facilities in Gates County.

Because of a declining population growth rate and limited development in the County, the demand for a public sewage system cannot justify the cost that would be involved.

CARRYING CAPACITY: LAND AND WATER

The Coastal Resources Commission is requiring that crucial and identifiable carrying capacity issues be addressed in the land use plans. "Particular attention should be given to the capability of the land to sustain whatever growth is called for, with emphasis on the limitations of the natural resources of the area". The planning problem thus involves determining at a point in time, given existing and available technology, existing economic ability to finance growth, available energy resources, and acceptable concepts of life styles, the optimum carrying capacity of an area.

The increasing awareness of the great value, both in ecological and in economical terms, of our estuarine waters and wetlands has caused increased concern over the quality of our coastal surface waters. These coastal waters are the collecting basins for land run-off from adjacent areas, for the drainage of the entire eastern divide, and for seepage of effluents from adjacent ground waters.

Perhaps the most significant index is the number of acres of state waters closed to the taking of shellfish. As of the end of February, approximately 670,000 acres, or about one-third of the state's coastal waters, were closed to our oyster and clam fishermen. Another indication of the degradation of water quality is the increases in fish diseases over the past decade culminating in significant fish mortalities in Albemarle Sound during the summer of 1975. Such trends are not as yet irreversible.

Diminution of the quality and availability of ground water resources in the coastal area is also a significant potential problem in the coastal area and hence also a potential carrying capacity limitation.

Most of the groundwater pollution resulting from surface activities remains within the upper few feet of the water table; however, the polluted groundwater flows laterally and discharges into streams, sounds, and other surface water bodies, and usually causes deterioration of the surface water quality.

Areas in which the water table aquifer is the primary source of fresh water and areas in which the soil conditions are not suitable for waste treatment should be protected with stringent regulations to prohibit the installation of any surface pollution into the surface waters.

The increasing density pattern of septic tank systems in the coastal area has led to a degradation of both ground and surface waters.

The most recent figures indicate that in the 20 county coastal area, 89% of the land areas have soils judged to be unsuitable for conventional septic systems. Summarized in a different way, if conventional septic systems are used for sewage disposal in the coastal area region, approximately 90% of these systems will malfunction and fail within the first year's use.

It might be appropriate to point out here that many coastal communities may assume that the adoption and enforcement of more stringent septic tank and land use density regulations, whether at the state or local level, coupled with the possible inability of the communities to finance central sewage facilities, may tend to severely retard economic development. However, the real long run effect is that such limitations should encourage an ordered, thoughtful pattern of development which benefits not only the permanent residents of the area but developers as well.

Detailed information concerning *actual and potential water quality problems in Gates County follows:

Waste Treatment Plants

Shoups Chowan River Inn

Design Capacity: .005 MGD

Current flow: .007 MGD

Receiving stream: Tributary to Chowan River

Treatment: septic tank

Adequacy: inadequate

Areas of Concern

none

In the population and density allocation section of this report, the distribution of the estimated population growth to the various land classifications is to be made (see page 66). The principle of carrying capacity is a storage determinant as to where population growth should be allocated. Since Gates County is estimated to decrease in population, no Developed or Transition growth areas were designated. Community lands were designated as they presently exist. Population increases in these areas will be minimal, if any at all.

Since the population is estimated to remain stable or decrease and there are no Developed or Transition lands in existence, carrying capacity of the land and water to sustain growth is not foreseen to be a problem during the planning period.

*This material was prepared by the Regional Water Quality Engineers of the Northeastern and Southeastern Field Offices of the Department of Natural and Economic Resources.

PLAN DESCRIPTION

LAND CLASSIFICATION

The purpose of the Land Classification System is to encourage coordination and consistency between local land use policies and those of State Government. Lands are classified by the local governments. The Coastal Resources Commission then reviews those classifications to ensure conformance with minimum guidelines for the system. The coastal county maps taken together will be the principal policy guide for State and Federal governmental decisions and activities which affect land use in the coastal area.

The system provides a guide for public investment in land. For example, state and local agencies can anticipate the need for early acquisition of lands and easements in the Transition class for schools, recreation, transportation, and other public facilities.

The system can also provide a useful framework for budgeting and planning for the construction of community facilities such as water and sewer systems, schools, and roads. The resources of many state and federal agencies, as well as those of the local government which are used for such facilities, can then be more efficiently allocated.

In addition, such a system will aid in better coordination of regulatory policies and decisions. Conservation and Rural Production lands will help to focus the attention of state and local agencies and interests concerned with the valuable natural resources of the state. On the other hand, lands in the Transition and Community classes will be of special concern to those agencies and interests who work for high quality development through local land use controls such as zoning and subdivision regulations.

Finally, the system can help to provide guidance for a more equitable distribution of the land tax burden. Private lands which are in the Rural and Conservation classes should have low taxes to reflect the policy that few, if any, public services will be provided to these lands. In contrast, lands in the Transition class should be taxed to pay for the large cost of new public services which will be required to support the density of growth anticipated.

The following five classifications and definitions have been adopted by the Coastal Resources Commission for use by local government planning teams. Their application to Gates County is shown on the Land Classification Map.

Developed

The Developed classification designates all land that has access to both public water and sewer, educational systems, and road systems - all of which are able to support the present population and its accompanying land uses including commercial, industrial, and institutional. These are areas with a minimum population of 2,000 people per square mile. There are presently no areas in the county that meet these criteria.

Transition

The Transition classification designates all land that has either 2,000 people per square mile and no public water and sewer, or land that has public water and sewer but does not have 2,000 people per square mile. This classification does not apply to any area of Gates County.

Community

The Community classification designates all lands that have minimum public services and includes clusters of one or more land uses. The Community class is mapped at several locations in Gates County. This classification

logically applies to the areas around the communities of Eure, Roduco, Gates, Eleanor's Crossroads, Gatesville, Corapeake, Sunbury and the Hobbsville/Mintonsville area.

Rural

The Rural classification includes all lands not included in the developed, transition, community, and conservation classes. Only limited public services are expected to be developed in these areas (access roads, electrical lines, etc.). The majority of Gates County's land is classed as Rural.

Conservation

Conservation is the fifth class. This identifies all land which should be maintained essentially in its natural state and where very limited or no public services are provided. These lands are fragile and may be easily destroyed by development. Areas adjacent to the Chowan River, Somertan Creek, Barnes Creek, Sarem Creek, Cole Creek, Bennetts Creek, Trotman Creek, and Lassitor and Raynor Swamps have been identified as flood prone areas and wooded swampland. Also included are the Chowan Swamp State Park, Chowan Swamp Game Land, and the State owned portion of the Merchants Mill Pond. The recent donation of land by Union Camp to N. C. State University located in Southeast Gates County is also included.

POPULATION AND DENSITY ALLOCATION

The population of Gates County has been projected by the County citizens to decline during the planning period. As a result, the Community and Rural areas were designated according to existing characteristics and availability of services. Population increases in these areas are expected to be minimal, if any increase at all. Population trend and citizen views were the primary guides for classifying land in Gates County. The density of areas designated as Community are areas where lot sizes are ten acres or less.

POTENTIAL AREAS OF ENVIRONMENTAL CONCERN

Various areas have been identified throughout the coastal counties as areas of great environmental importance. These are areas in which uncontrolled or incompatible development might result in irreparable damage. Unless these pressures are controlled by coordinated management, the very features of the coast which make it economically, aesthetically, and ecologically rich will be destroyed.

Due to the distance of Gates County from the coast, many of the environmentally critical areas identified in other coastal counties are not found in Gates. Development trends in other coastal counties (seasonal population demands, etc.) that promote development which is detrimental to sensitive environmental areas are not as prevalent in Gates County.

Estuarine waters, public trust waters, and areas that sustain remnant species are the only types of environmentally critical areas identified by the citizens of Gates County. These may be designated as "Areas of Environmental Concern" by the Coastal Resources Commission.

ESTUARINE WATERS

(a) Description: Estuarine waters are defined as "all of the water of the Atlantic Ocean within the boundary of North Carolina and all the waters of the bays, sounds, rivers, and tributaries thereto seaward of the dividing line between coastal fishing waters and inland fishing waters," as set forth in an agreement adopted by the Wildlife Resources Commission and the Department of Conservation and Development filed with the Secretary of State.

(b) Significance: Estuaries are among the most productive natural environments of North Carolina. They not only support valuable commercial and sports fisheries, but are also utilized for commercial navigation, recreation, and

aesthetic purposes. Species dependent upon estuaries such as menhaden, shrimp, flounder, oysters and crabs make up 90 percent of the total value of North Carolina's commercial catch. These species must spend all or some part of their life cycle in the estuary. The high level of commercial and sports fisheries and the aesthetic appeal of Coastal North Carolina is dependent upon the protection and sustained quality of our estuarine areas.

(c) Appropriate Uses: Highest priority shall be allocated to the conservation of estuarine waters. The development of navigational channels, the use of bulkheads to prevent erosion, and the building of piers or wharfs where no other feasible alternative exists are examples of land uses appropriate within estuarine waters, provided that such land uses will not be detrimental to the biological and physical estuarine functions and public trust rights. Projects which would directly or indirectly block or impair existing navigation channels, increase shoreline erosion, deposit spoils below mean high tide, cause adverse water circulation patterns, violate water quality standards, or cause degradation of shellfish waters are generally considered incompatible with the management of estuarine waters.

(d) Applicability to Gates County: Estuarine waters in Gates County have been identified as the Chowan River, Somertan Creek, Buckhorn Creek to the Seaboard Railroad, Sarem Creek to the intersection of Sarem and Cole Creeks, Bennetts Creek to within two miles of Gatesville, and Catherine Creek to the intersection of Catherine and Trotman Creeks.

PUBLIC TRUST WATERS

(a) Description: All waters of the Atlantic Ocean and the lands thereunder from the mean high water mark to the seaward limit of State jurisdiction; all natural bodies of water subject to measurable lunar tides and lands thereunder to the mean high water mark; all navigable natural bodies of water and lands thereunder to the mean high water mark or ordinary high water mark as the case may be, except privately owned lakes to which the public has rights of navigation; all waters in artificially created bodies of water in which the public has acquired rights by prescription, custom, usage, dedication or any other means. In determining whether the public has acquired rights in artificially created bodies of water, the following factors shall be considered: (i) the use of the body of water by the public; (ii) the length of time the public has used the area; (iii) the value of public resources in the body of water; (iv) whether the public resources in the body of water are mobile to the extent that they can move into natural bodies of water; (v) whether the creation of the artificial body of water required permission from the state; and (vi) the value of the body of water to the public for navigation from one public area to another public area.

(b) Significance: The public has rights in these waters including navigation and recreation. In addition, these waters support valuable commercial and sports fisheries, have aesthetic value, and are important potential resources for economic development.

(c) Appropriate Uses: Any land use which interferes with the public right of navigation, or other public trust rights, which the public may be found to have in these waters, shall not be allowed. The development of navigational channels, drainage ditches, the use of bulkheads to prevent erosion, and the building of piers or wharfs are examples of land uses appropriate within public

trust waters provided that such land uses will not be detrimental to the biological and physical functions and public trust rights. Projects which would directly or indirectly block or impair existing navigation channels, increase shoreline erosion, deposit spoils below mean high tide, cause adverse water circulation patterns, violate water quality standards, or cause degradation of shellfish waters are generally considered incompatible with the management of public trust waters.

(d) Applicability to Gates County: Includes all waters that are capable of being navigated in their natural condition by the ordinary modes of navigation including modes of navigation used for recreational purposes

AREAS THAT SUSTAIN REMNANT SPECIES

(a) Description: Areas that sustain remnant species are those places that support native plants or animals, rare or endangered, within the coastal area

(b) Significance: Complex natural areas provide the few remaining examples of conditions that existed within the coastal area prior to settlement by Western man. Often these natural areas provide habitat conditions suitable for rare or endangered species or they support plant and animal communities representative of pre-settlement conditions. These areas help provide a historical perspective to changing natural conditions in the coastal area and together are important and irreplaceable scientific and educational resources.

(c) Appropriate Land Uses: Lands within the AEC shall not be planned for uses or kinds of development that will unnecessarily jeopardize the natural or primitive character of the natural area directly or indirectly through increased accessibility. Additionally, lands adjacent to the complex natural area should not be planned for additional development that would unnecessarily endanger the recognized value of the AEC. The variability between kinds of complex natural

areas and between land uses adjacent to those natural areas means that the range of permissible uses and intensity of use must be carefully tailored to the individual area.

(d) Applicability to Gates County: The red-cockaded woodpecker occurs in stands of mature loblolly pine. The southeastern shrew, swamp short-tailed shrew and southern hog lemming occur in the Dismal Swamp or eastern portion of the county. All of these are classified endangered species. The endangered shortnosed sturgeon and the Atlantic sturgeon probably occur in the Chowan River, however, occurrence records are scarce for these species.

CITY/COUNTY RELATIONSHIP

The relationship between the county and Town of Gatesville planning effort has been closely coordinated. Since Gatesville did not choose to apply for funds to do its land development plan locally, the county assumed the responsibility upon direction of the Guidelines adopted by the Coastal Resources Commission.

Several methods were used to assure that the relationship between Gatesville and the county would be coordinated without conflicts. A questionnaire was distributed to all parts of the county, to citizens in Gatesville as well as to those in the rural, unincorporated areas.

Joint public hearings were held in the county involving Gatesville citizens who participated in discussions and decisions concerning the town.

A Citizens Advisory Board was appointed which included representatives from the rural county and the town.

As you review the Land Classification Map provided herein, you will notice that the Community classification extends from the town's jurisdiction without conflict into the unincorporated rural areas.

SUMMARY

A summary of reference material used as sources of data for the Land Use Plan is listed as follows:

1. Coastal Area Management, A New Look on the Horizon, N. C. Agricultural Extension Service and N. C. Department of Natural and Economic Resources.
2. N. C. Commuting Patterns, 1960-1970, Employment Security Commission, Job Research Center, March 1974.
3. Tar Heel Economist, November 1972.
4. N. C. Department of Agriculture
5. Change: Agriculture and Economic Trends in N. C., Preliminary Statistics.
6. Impact '76, Gates County, N. C.
7. An Appraisal of Potential for Outdoor Recreation, Gates County, N. C., Gates Soil and Water Conservation District, Gatesville, N.C., April, 1974.
8. N. C. Department of Natural and Economic Resources, Recreation Section, General Inventory Summary, March, 1974.
9. State Guidelines for Local Planning in the Coastal Area Under the Coastal Area Management Act of 1974.
10. Geology and Ground Water Resources in the Greenville, N. C. Area, Philip M. Brown, Geologist, Geological Survey, U. S. Department of Interior, 1959.
11. U. S. Department of Agriculture, Soil Conservation District, Raleigh, N.C.
12. School Survey, Gates County, 1973-74, North Carolina Department of Public Instruction, Division of School Planning.
13. Gates County North Carolina Water System Study, 1975, Rivers and Associates, Inc., Consulting Engineers, Greenville, North Carolina.
14. Comprehensive Consumer Characteristics, Gates County, Gates County Development Commission, 1969.
15. A Comprehensive Water and Sewer Study for Gates County, Rivers and Associates, 1970.
16. Overall Economic Development Plan, Albemarle Regional Planning and Development Commission, 1971.
17. Wildlife and Land Use Planning with Particular Reference to Coastal Counties, North Carolina Wildlife Resources Commission, 1975.

18. A New Geography of North Carolina, Bill Sharpe, 1966.
19. Vital Statistics, 1969, 1971, 1972, 1973, 1974, North Carolina State Board of Health
20. County Population Trends, North Carolina, 1790-1960, Carolina Population Center, University of North Carolina and Statistical Services Center, Budget Division, Department of Administration, State of North Carolina, 1969
21. North Carolina State Government Statistical Abstract, Statistical Services Section, Office of State Budget, Department of Administration, 1973.
22. 1970 Census of Population, North Carolina, U. S. Department of Commerce.
23. Thoroughfare Plan, Gates County, North Carolina, N. C. Department of Transportation.
24. North Carolina Labor Force Estimates, Employment Security Commission, Raleigh, 1975.
25. County Commissioners Farm Census Summary, N. C. and U. S. Departments of Agriculture, Crop Reporting Service, Raleigh, N. C.

APPENDICES

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GATES COUNTY WATER SYSTEM
COST ESTIMATE

DISTRIBUTION

638,880 lf	6" PVC	2.00	\$1,277,760.00
316,800 lf	4" PVC	1.40	443,520.00
137	6" Valves	160.00	21,920.00
74 ea.	4" Valves	130.00	9,620.00
3 ea.	Two Way Meters	4,500.00	13,500.00
70 ea.	6" Hydrants	350.00	24,500.00
1,400 ea.	3/4" Services	130.00	182,000.00
10 ea.	2" Services	450.00	4,500.00
11 ea.	Blow-off Valves	60.00	660.00
3,500 lf	Misc. Casing	30.00	105,000.00
7 ea.	Railroad Crossings	1,500.00	10,500.00
	Bridge & Creek Crossings		20,000.00
			<hr/>
			\$2,113,480.00

SUPPLY

3 ea.	500 GPM Wells & Pumps	81,000.00
1 ea.	Treatment Plant/Pumps & Controls (900 GPM)	250,000.00
2 ea.	250,000 gal. Elevated Tanks	270,000.00
2 ea.	Tank Foundation	126,000.00

TOTAL ESTIMATED CONSTRUCTION COST

\$2,840,000.00

TECHNICAL SERVICES

Soil Borings	\$ 1,200.00
Surveys	200.00
Engineering Fee @4.9%	139,180.00
Inspection Fee @ 2%	56,810.00
<hr/>	
	\$197,390.00

\$ 197,390.00

Legal and Administrative	28,330.00
Land Cost	12,000.00
Interest During Construction @ 10% ⁺	160,000.00
Contengencies @ 7.5%	211,800.00

TOTAL ESTIMATED PROJECT COST

\$3,450,000.00

FUNDING ANALYSIS

State Grant	\$ 83,000.00
FHA Grant	1,600,000.00
CPRC Grant	350,000.00

TOTAL GRANTS	\$2,033,000.00
FHA Loan	1,417,000.00

TOTAL PROJECT COST	\$3,450,000.00
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ASSUME TOTAL INITIAL USERS	1,400
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Estimated Annual Income:

First	2,000 gal.	@	6.00 (Minimum)	Average
Next	2,000 gal.		1.50/1,000 gal.	Rate = 7.85/use Mo.
Next	5,000 gal.		1.00/1,000 gal.	
All Over	10,000 gal.		.80/1,000 gal.	

Anticipated Income From Sales of Water:

560 Customers @ 2,000 gal./mo. @	6.00	40,320.00
378 3,000	7.50	34,020.00
350 5,000	10.00	42,000.00
98 7,000	12.00	14,112.00
8 11,000	15.80	1,517.00

TOTAL ESTIMATED INCOME PER YEAR	131,969.00
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OPERATION AND MAINTENANCE EXPENSES*

Debt Repayment

1,417,000 (.05928) =	84,000.00
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Operation and Maintenance =	45,400.00 *
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\$129,400.00/yr.

Annual Reserve = \$2,569.00

*OPERATING EXPENSES

Maintenance, Billing & Collections	30,000.00
Analysis of Water Samples	200.00
Audit	500.00
Materials and Supplies	5,000.00
Electrical Power	5,500.00
Insurance	700.00
Office Expense	3,500.00

TOTAL EXPENSES	\$45,400.00/yr.
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GATES COUNTY

Characteristics of Persons Filling Out Questionnaires

1. Male 60.9%
Female 39.1%
2. White 44.8%
Non-White 55.2%
3. Ages 17-25 4.7%
26-40 54.5%
41-55 30.7%
56+ 9.5%
4. Do you live on a farm?
yes 29.0%
no 71.0%
5. Number of family living at home.
1-2 7.7%
3-5 60.0%
6-8 24.7%
9+ 7.7%
6. Education
High school or less 49.4%
Beyond high school 50.6%
7. Income
Under \$2,000 14.5%
2,000 - 3,999 12.5%
4,000 - 5,999 11.3%
6,000 - 7,999 12.3%
8,000 - 9,999 11.9%
10,000 - 15,000 20.6%
over 15,000 16.8%

CATEGORIES

A.) Law Enforcement

1. Is fire protection adequate?

No problem	38.9%
Slight problem	30.9%
Moderate problem	18.7%
Severe problem	11.6%

2. Are drugs a problem?

No problem	12.9%
Slight problem	24.3%
Moderate problem	22.2%
Severe problem	40.6%

3. Is police protection adequate?

No problem	27.7%
Slight problem	25.2%
Moderate Problem	24.8%
Severe problem	22.3%

4. How much money should be spent for the control of organized crime?

Spend no funds	8.5%
Spend less funds	5.1%
Spend same funds	33.1%
Spend more funds	53.1%

5. How much should be spent to control illegal drugs?

Spend no funds	5.3%
Spend less funds	4.4%
Spend same funds	18.3%
Spend more funds	71.8%

6. How much should be spent for crime prevention and control?

Spend no funds	5.8%
Spend less funds	5.4%
Spend same funds	28.0%
Spend more funds	60.6%

7. Is youth counseling service adequate?

No problem	20.9%
Slight problem	26.9%
Moderate problem	21.1%
Severe problem	30.9%

B.) ENVIRONMENTAL CONSIDERATIONS

1. Is water pollution a problem?

No problem	40.4%
Slight problem	36.3%
Moderate problem	12.5%
Severe problem	10.7%

2. When choosing a community in which to live, how important would the quality of water and air be?

Not important	1.3%
Slight importance	7.4%
Moderate importance	22.6%
Great importance	68.7%

3. Agriculture pollution should be regulated.

Agree	83.2%
Disagree	16.6%

4. I would pay high cost for commodities if it meant no pollution.

Agree	66.6%
Disagree	33.9%

5. I prefer jobs over clean air and water.

Agree	39.2%
Disagree	60.8%

6. Large developments should be required to file an environmental impact statement.

Agree	83.7%
Disagree	16.3%

7. How much money should be spent for preventing water pollution?

Spend no funds	7.3%
Spend less funds	8.3%
Spend some funds	48.2%
Spend more funds	36.1%

C.) LAND USE PLANNING

1. Is long range planning in the County adequate?

No problem	29.4%
Slight problem	23.5%
Moderate problem	20.2%
Severe problem	26.8%

2. Future development should be planned for.

Agree	93.5%
Disagree	6.5%

3. Growth should occur at a slow, controlled rate.

Agree	54.0%
Disagree	45.8%

4. A person should be able to do anything with his land no matter how it affects those around him.

Agree	23.6%
Disagree	72.2%

5. There is danger in rapid development.

Agree	66.7%
Disagree	33.3%

6. Mobile home development should be controlled.

Agree	57.7%
Disagree	42.3%

7. How much money should be spent on restrictive zoning?

Spend no funds	12.8%
Spend less funds	13.8%
Spend same funds	47.7%
Spend more funds	25.5%

8. The present population should be maintained.

Agree	43.8%
Disagree	56.0%

9. What size community do you prefer?

Country	55.4%
near small town of 10,000	24.5%
near small town of 10,000-50,000	8.4%
near medium sized town 5,000-200,000	5.9%
near metropolitan area over 200,000	5.7%

10. Where do you prefer your home to be located?

Near downtown	3.6%
In city limits	12.8%
In 15 minutes of town	50.8%
Over 15 minutes away	19.4%
Over 30 minutes away	13.4%

11. In choosing a community in which to live, how important would the size of population be?

No importance	5.9%
Slight importance	21.9%
Moderate importance	47.2%
Great importance	25.0%

12. In choosing a community in which to live, how important would the availability of shopping facilities be?

No importance	8.2%
Slight importance	18.6%
Moderate importance	42.5%
Great importance	30.7%

D.) EDUCATIONAL FACILITIES

1. Are schools adequate?

No problem	47.9%
Slight problem	24.8%
Moderate problem	17.2%
Severe problem	10.0%

2. Is the kindergarten program adequate?

No problem	68.1%
Slight problem	19.3%
Moderate problem	9.6%
Severe problem	3.1%

3. Is vocational education adequate?

No problem	42.3%
Slight problem	26.0%
Moderate problem	17.7%
Severe problem	13.9%

4. Is the adult education program adequate?

No problem	52.8%
Slight problem	22.8%
Moderate problem	15.3%
Severe problem	9.1%

5. In choosing a community in which to live, how important would the quality of schools be?

No importance	2.3%
Slight importance	4.3%
Moderate importance	19.5%
Great importance	73.9%
6. How much money should be spent for adult job training?

Spend no funds	3.6%
Spend less funds	5.9%
Spend same funds	26.8%
Spend more funds	63.4%
7. How much should be spent for special education for the retarded and handicapped?

Spend no funds	3.6%
Spend less funds	3.2%
Spend same funds	18.7%
Spend more funds	74.4%
8. How much should be spent for community colleges and technical institutes?

Spend no funds	4.7%
Spend less funds	3.1%
Spend same funds	26.7%
Spend more funds	65.4%
9. How much should be spent for public education?

Spend no funds	5.0%
Spend less funds	2.3%
Spend same funds	30.4%
Spend more funds	62.1%
10. How much should be spent for public kindergarten?

Spend no funds	6.6%
Spend less funds	5.5%
Spend same funds	46.9%
Spend more funds	40.8%
11. Are child care and kindergartens adequate?

No problem	47.7%
Slight problem	24.8%
Moderate problem	15.7%
Severe problem	13.6%

E.) COMMUNITY FACILITIES

1. Is garbage collection and disposal adequate?

No problem	46.0%
Slight problem	19.2%
Moderate problem	12.6%
Severe problem	22.1%

2. Are water and sewer services adequate?

No problem	54.1%
Slight problem	15.5%
Moderate problem	11.9%
Severe problem	18.5%

3. Are libraries adequate?

No problem	52.6%
Slight problem	23.5%
Moderate problem	17.5%

4. Is the transportation system adequate?

No problem	38.4%
Slight problem	17.4%
Moderate problem	12.4%
Severe problem	31.9%

5. How much money should be spent on public water systems?

Spend no funds	13.9%
Spend less funds	5.1%
Spend same funds	34.4%
Spend more funds	46.4%

6. How much should be spent to support public libraries and museums?

Spend no funds	5.6%
Spend less funds	6.7%
Spend same funds	40.8%
Spend more funds	46.7%

7. How much should be spent for public transportation?

Spend no funds	21.3%
Spend less funds	7.8%
Spend same funds	26.4%
Spend more funds	44.4%

8. How much should be spent for airport facilities?

Spend no funds	32.2%
Spend less funds	13.8%
Spend same funds	27.9%
Spend more funds	25.9%

9. How much should be spent for solid waste disposal?

Spend no funds	5.8%
Spend less funds	7.8%
Spend same funds	47.4%
Spend more funds	38.8%

F.) RECREATION

1. Are tourist facilities adequate?

No problem	26.8%
Slight problem	18.5%
Moderate problem	16.4%
Severe problem	38.3%

2. Are recreation facilities adequate?

No problem	12.1%
Slight problem	20.4%
Moderate problem	19.5%
Severe problem	47.9%

3. When choosing a community in which to live, how important would the availability of recreational facilities be?

Not important	9.1%
Slight importance	21.0%
Moderate importance	32.1%
Great importance	37.8%

4. How much money should be spent to develop public recreation facilities and programs?

Spend no funds	6.5%
Spend less funds	5.6%
Spend same funds	25.5%
Spend more funds	62.2%

5. How much should be spent to develop forests and parks for the public?

Spend no funds	13.0%
Spend less funds	8.4%
Spend same funds	26.8%
Spend more funds	51.6%

6. How much should be spent for public parks?

Spend no funds	17.3%
Spend less funds	8.0%
Spend same funds	23.0%
Spend more funds	51.6%

7. How much should be spent to develop tourist attractions?

Spend no funds	11.2%
Spend less funds	12.7%
Spend same funds	31.2%
Spend more funds	44.7%

8. How much should be spent for preservation of wildlife?

Spend no funds	6.6%
Spend less funds	8.9%
Spend same funds	49.8%
Spend more funds	34.6%

G.) INDUSTRIAL DEVELOPMENT AND EMPLOYMENT

1. Are employment opportunities adequate?

No problem	12.1%
Slight problem	19.6%
Moderate problem	16.2%
Severe problem	52.1%

2. Is unemployment a problem?

No problem	11.9%
Slight problem	23.3%
Moderate problem	20.3%
Severe problem	44.4%

3. Is industrial development adequate?

No problem	18.3%
Slight problem	17.7%
Moderate problem	17.3%
Severe problem	46.8%

4. When choosing a community in which to live, how important would job opportunities be?
- | | |
|---------------------|-------|
| No importance | 5.6% |
| Slight importance | 12.9% |
| Moderate importance | 20.2% |
| Great importance | 61.3% |
5. I would pay higher cost for items if it meant no pollution.
- | | |
|----------|-------|
| Agree | 66.0% |
| Disagree | 33.9% |
6. If given the choice, I would choose jobs over clean air and water.
- | | |
|----------|-------|
| Agree | 39.2% |
| Disagree | 60.8% |
7. Some industries are not worth the problems they bring.
- | | |
|----------|-------|
| Agree | 74.0% |
| Disagree | 25.8% |
8. Economic development is more important than environmental considerations.
- | | |
|----------|-------|
| Agree | 25.3% |
| Disagree | 74.5% |
9. More industry will improve the life quality.
- | | |
|----------|-------|
| Agree | 77.7% |
| Disagree | 22.3% |
10. There is enough economic development in the county.
- | | |
|----------|-------|
| Agree | 16.8% |
| Disagree | 83.2% |
11. How much money should be spend for industrial development?
- | | |
|------------------|-------|
| Spend no funds | 10.6% |
| Spend less funds | 7.4% |
| Spend same funds | 31.0% |
| Spend more funds | 50.8% |
12. How much should be spent to develop agriculture production and market?
- | | |
|------------------|-------|
| Spend no funds | 5.9% |
| Spend less funds | 4.1% |
| Spend same funds | 38.4% |
| Spend more funds | 51.4% |

13. How much should be spent to help in finding jobs?

Spend no funds	5.8%
Spend less funds	8.6%
Spend same funds	34.7%
Spend more funds	50.7%

14. How much should be spent to develop employment?

Spend no funds	4.4%
Spend less funds	4.2%
Spend same funds	20.6%
Spend more funds	70.6%

H.) COMMUNITY RESPONSIBILITY AND PRIDE

1. Is government responsiveness a problem?

No problem	33.6%
Slight problem	23.4%
Moderate problem	20.6%
Severe problem	22.4%

2. Is community pride and spirit adequate?

No problem	31.8%
Slight problem	29.5%
Moderate problem	19.7%
Severe problem	18.8%

3. Is community participation adequate?

No problem	20.8%
Slight problem	28.9%
Moderate problem	22.2%
Severe problem	27.9%

4. When choosing a community in which to live, how important is the friendliness of that community?

Not important	1.9%
Slight importance	10.1%
Moderate importance	27.7%
Great importance	60.3%

5. If you had the opportunity, how would you feel about leaving Gates County?

Never leave	25.0%
Reluctant	54.3%
No difference	9.0%
Happier elsewhere	5.5%
Like to leave	6.2%

6. When choosing a community in which to live, how important would the availability of a variety of clubs and organizations be?

No importance	11.8%
Slight importance	28.9%
Moderate importance	30.8%
Great importance	28.5%

7. When choosing a community in which to live, how important would it be that the community is a good place to raise children?

No importance	1.5%
Slight importance	5.0%
Moderate importance	14.3%
Great importance	79.3%

8. When choosing a community in which to live, how important would the opportunity for a voice in community affairs be?

No importance	11.5%
Slight importance	19.3%
Moderate importance	33.0%
Great importance	36.3%

I.) MEDICAL FACILITIES

1. When choosing a community in which to live, how important would the quality of medical facilities be?

Not important	3.7%
Slight importance	10.1%
Moderate importance	20.6%
Great importance	65.5%

2. Are medical facilities and staff adequate?

No problem	12.7%
Slight problem	16.1%
Moderate problem	13.3%
Severe problem	57.7%

J.) SOCIAL SERVICES

1. How much money should be spent to help find jobs?

Spend no funds	5.8%
Spend less funds	8.6%
Spend same funds	34.7%
Spend more funds	50.7%

2. How much should be spent for retirement benefits?

Spend no funds	6.1%
Spend less funds	3.8%
Spend same funds	29.9%
Spend more funds	60.0%

3. How much should be spent to assist the old and poor?

Spend no funds	2.5%
Spend less funds	3.4%
Spend same funds	25.2%
Spend more funds	68.8%

4. How much should be spent for health and medical care?

Spend no funds	2.6%
Spend less funds	2.6%
Spend same funds	16.8%
Spend more funds	77.7%

5. Is assistance to the poor adequate?

No problem	23.8%
Slight problem	27.4%
Moderate problem	22.5%
Severe problem	26.1%

6. Is the youth counseling service adequate?

No problem	20.5%
Slight problem	26.9%
Moderate problem	21.1%
Severe problem	30.9%

7. Is assistance to the elderly adequate?

No problem	23.4%
Slight problem	21.4%
Moderate problem	25.5%
Severe problem	29.5%

K.) CULTURAL ACTIVITIES

1. Are cultural opportunities adequate?

No problem	29.3%
Slight problem	18.5%
Moderate problem	21.6%
Severe problem	30.6%

2. When choosing a community in which to live, how important would religious worship be?

No importance	2.8%
Slight importance	9.2%
Moderate importance	28.1%
Great importance	59.8%

3. How much money should be spent for the preservation of historic sites?

Spend no funds	10.5%
Spend less funds	9.7%
Spend same funds	37.6%
Spend more funds	42.0%

4. How much should be spent to support public libraries and museums?

Spend no funds	5.6%
Spend less funds	6.7%
Spend same funds	40.8%
Spend more funds	46.7%

5. When choosing a community in which to live, how important would the availability of cultural opportunities be?

No importance	9.9%
Slight importance	20.9%
Moderate importance	38.7%
Great importance	30.6%

